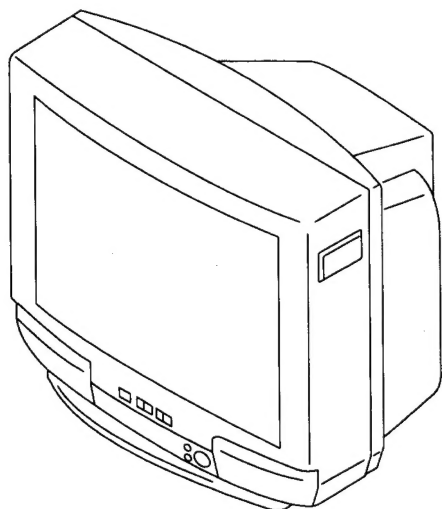


KV-T25L1/T25MF1/T25MN1

KV-T25MN11/T25SF1/T25SF11

RM-870

SERVICE MANUAL



ME Model

KV-T25L1 Chassis No. SCC-H45E-A
KV-T25MF1 Chassis No. SCC-H45B-A
KV-T25MN11 Chassis No. SCC-H45F-A

Thailand Model

KV-T25MF1 Chassis No. SCC-H85A-A

Ausutralian Model

KV-T25SF1 Chassis No. SCC-H84A-A

Newzealand Model

KV-T25SF11 Chassis No. SCC-H86A-A

Hongkong Model

KV-T25MN1 Chassis No. SCC-H72B-A

BG-1S CHASSIS

MODEL OF THE SAME SERIES

KV-T25L1/T25MF1/T25MN1	
KV-T25MN11/T25SF1/T25SF11	



TRINITRON® COLOR TV
SONY®

SPECIFICATIONS

		Note
Power requirements	110-240 V AC, 50/60 Hz	
Power consumption (W)	Indicated on the rear of the TV	
Television system	B/G, I, D/K, M	KV-T25MF1/T25MN11
	B/G	KV-T25L1/T25SF1/T25SF11
Color system	PAL, PAL60, SECAM, NTSC4.43, NTSC3.58	KV-T25MF1/T25MN11
	PAL, PAL60, SECAM, NTSC4.43	KV-T25L1
	PAL, PAL60, NTSC4.43, NTSC3.58	KV-T25SF1/T25SF11
Stereo system	NICAM Stereo B/G, I; A2 Stereo (German) B/G	KV-T25MN11 only
Channel coverage B/G	VHF: E2 to E12/UHF: E21 to E69/CATV: S01 to S03, S1 to S41	KV-T25L1/T25MF1/T25MN11
	VHF: 0 to 12, 5A, 9A/UHF: 28 to 69/CATV: S01 to S03, S1 to S41	KV-T25SF1
	VHF: 1 to 11/UHF: 21 to 69/CATV: S01 to S03, S1 to S41	KV-T25SF11
	I	
D/K	UHF: B21 to B68/CATV: S01 to S03, S1 to S41	
M	VHF: C1 to C12, R1 to R12/UHF: C13 to C57, R21 to R60/ CATV: S01 to S03, S1 to S41, Z1 to Z39	
	VHF: A2 to A13/UHF: A14 to A79/ CATV: A-8 to A-2, A to W+4, W+6 to W+84	
Audio output (speaker)	5W × 2	
Inputs	Antenna: 75 ohms	
	VIDEO INPUT jacks: phono jacks Video: 1 Vp-p, 75 ohms Audio: 500 mVrms, high impedance	
Outputs	Headphone jack: mini jack	
	Earphone jack: mini jack	KV-T25L1 only
	MONITOR OUT jacks: phono jacks Video: 1 Vp-p, 75 ohms Audio: 500 mVrms	
Picture tube Tube size (cm)	25 in.	
	64	Measured diagonally
Screen size (cm)	60	Measured diagonally
Dimensions (w/h/d, mm)	613 × 542 × 472	
Mass (kg)	32	

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!


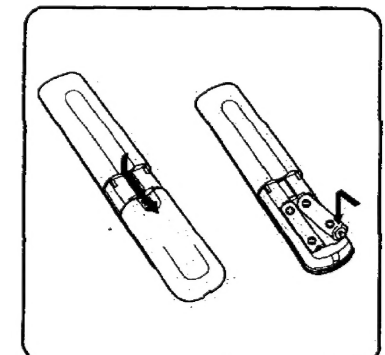
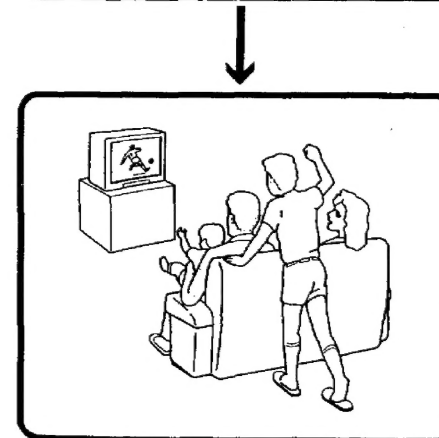
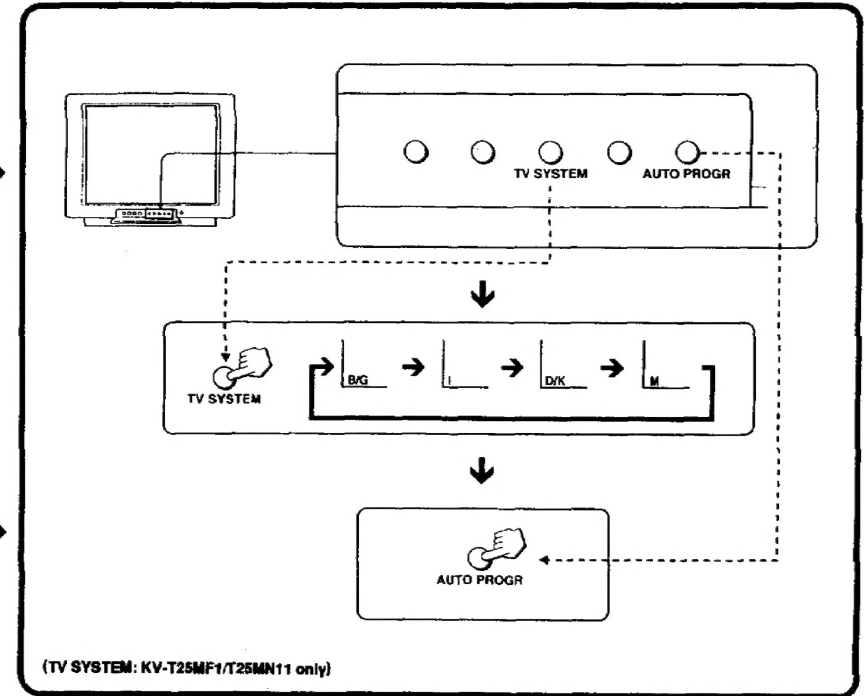
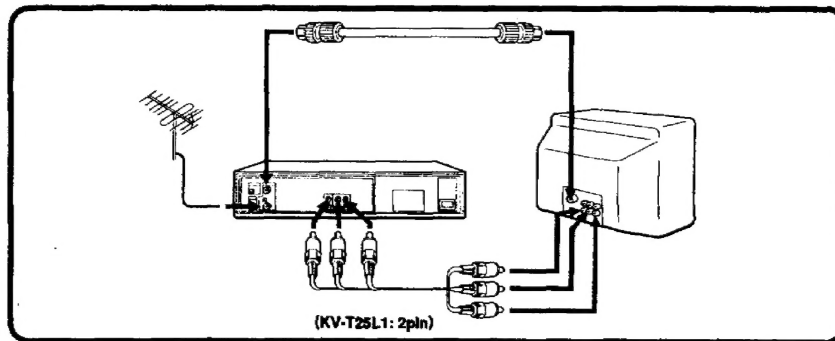
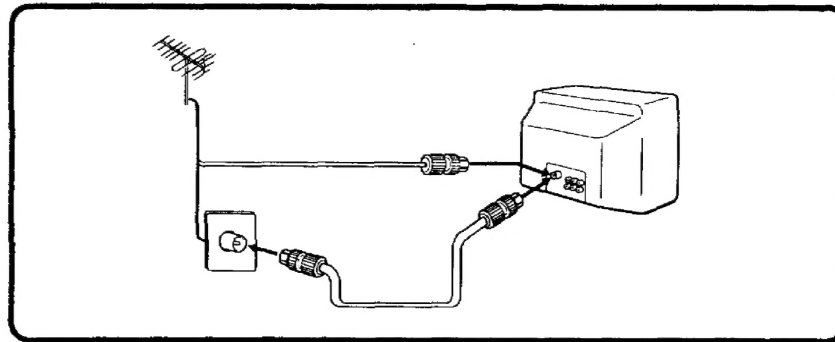
COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1 GENERAL

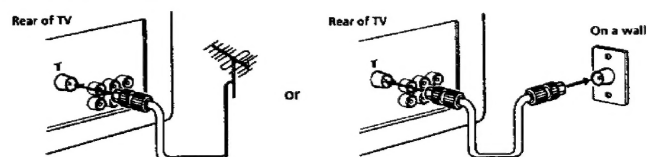
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



Connections

Connecting a VHF antenna or a combination VHF/UHF antenna — 75-ohm coaxial cable (round)

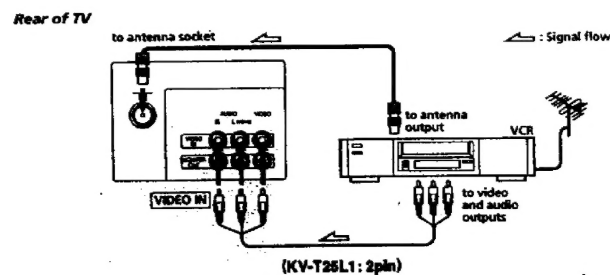
Attach an optional IEC antenna connector to the 75-ohm coaxial cable.
Plug the connector into the **T** (antenna) socket at the rear of the TV.



Connecting optional equipment

You can connect optional audio/video equipment to your TV such as a VCR, multi disc player, camcorder, video game or stereo system.

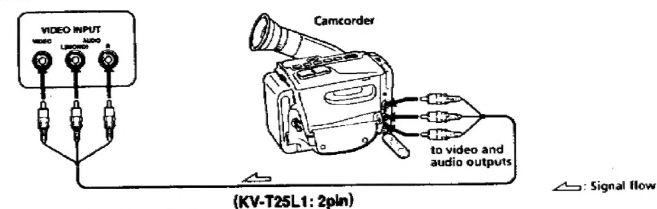
Connecting video equipment using video input jacks



When connecting a monaural VCR

Connect the yellow plug to VIDEO and the black plug to AUDIO-L (MONO).

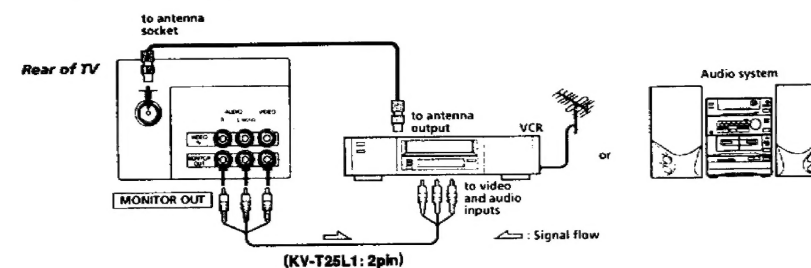
Front of TV



When using the video input jacks

Do not connect video equipment to the video input jacks at the front and the rear of your TV simultaneously; otherwise the picture will not be displayed properly on the screen.

Connecting audio/video equipment using MONITOR OUT jacks



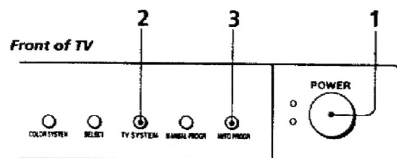
When recording through the MONITOR OUT jacks

If you change the channel or video input while recording with a VCR, the channel or video input you are recording also will be changed.

Presetting channels

Presetting channels automatically

You can preset up to 80 TV channels in numerical sequence from program position 1.

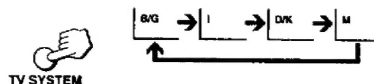


1 Press POWER.

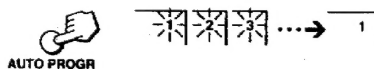


When the TV is in standby mode after pressing POWER, press POWER on the remote commander.

2 Press TV SYSTEM until your local TV system appears. (KV-T25MF1/T25MN11 only)



3 Press AUTO PROGR.



To start presetting channels automatically from the specified program position

- 1 Press MANUAL PROGR.
- 2 Press TV SYSTEM to select your local TV system. (KV-T25MF1/T25MN11 only)
- 3 Press PROGR +/- to select the program position.
- 4 Press AUTO PROGR.

6-EN Getting Started

Presetting channels manually

To change the channel for a particular program position or to receive a channel with a weak signal, preset the channel manually.

1 Press MANUAL PROGR.

2 Press PROGR +/- until the required program position appears on the screen.

3 Press TV SYSTEM until your local TV system appears. (KV-T25MF1/T25MN11 only)

4 Press VOLUME +/- on the TV until the required channel picture appears on the screen.

5 Press MANUAL PROGR.

If the TV system is not properly selected
The color of the picture may be poor and/or the sound may be noisy. In this case, select the appropriate TV system. (KV-T25MF1/T25MN11 only)

- 1 Press PROGR +/- to select the program position.
- 2 Press TV SYSTEM until the picture and sound become normal.

Notes (KV-T25MF1/T25MN11 only)

- If you do not know your local TV system, consult your nearest authorized service center or dealer.
- The setting of the TV SYSTEM is memorized for each program position.

Disabling program positions

By disabling unused or unwanted program positions, you can skip those positions when you press PROGR +/-.

1 Press PROGR +/- until the unused or unwanted program position appears on the screen.

2 Press MANUAL PROGR.

3 Press PIC MODE on the remote commander.

4 Press MANUAL PROGR.

To cancel the skip setting
Preset the channel manually or automatically again.

Operations

Watching the TV

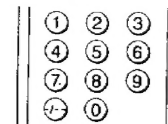
1 Press POWER to turn the TV on.



When the TV is in standby mode after pressing POWER, press POWER on the remote commander.

2 Select the TV channel you want to watch.

To select a channel directly
Press a number button.



To select a two-digit channel, press "-/-" before the number buttons.
For example: to select channel 25, press "-/-" and then "2" and "5."



To scan through channels

Press PROGR +/- until the channel you want appears.

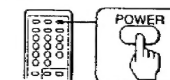


3 Press VOL +/- to adjust the volume.



Switching off the TV

To switch off the TV temporarily, press POWER on the remote commander.



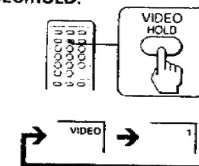
To switch off the TV completely, press POWER on the TV.

If the power on the TV is turned off in standby mode, the STANDBY indicator may remain alight for a while.

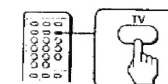


Watching the video input

Press VIDEO/HOLD.

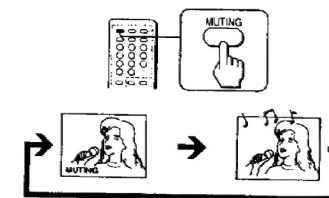


To watch TV, press TV.



Muting the sound

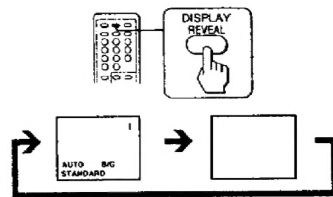
Press MUTING.



Displaying on-screen information

Press DISPLAY/REVEAL.

The program position, local system, and TV settings are displayed on the screen.

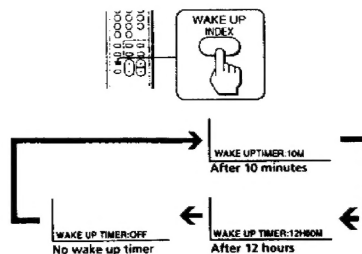


Setting the Wake Up Timer

You can set the TV to turn on automatically after the period of time you want.

1 Press WAKE UP/INDEX repeatedly to set the timer.

The on-screen display appears and the WAKE UP/ STEREO indicator lights up.



2 If you want a particular TV program or video input to be displayed using the Wake Up Timer, select the TV program or video mode.

3 Press POWER on the remote commander or set the Sleep Timer to turn off the TV in standby mode.

To cancel the Wake Up Timer, press WAKE UP/ INDEX repeatedly until "WAKE UP TIMER: OFF" appears, or turn off the main power of the TV.

Notes

- The Wake Up Timer starts immediately after the on-screen display disappears.
- The last TV program position or video mode just before the TV

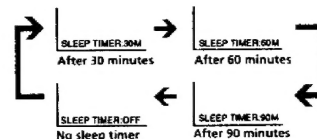
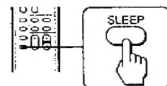
turns into standby mode will appear when the TV turns on using the Wake Up Timer.

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up Timer, the TV automatically turns into standby mode. When you want to continue watching the TV, press any button or control on the TV or remote commander.

Setting the Sleep Timer

You can set the TV to turn off automatically after the period of time you want.

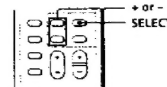
Press SLEEP.



To cancel the Sleep Timer, press SLEEP repeatedly until "SLEEP TIMER: OFF" appears, or turn the TV off.

Changing the on-screen display language

If you prefer Chinese to English, you can change the on-screen display language. You can use buttons on both the remote commander and the TV.



1 Press SELECT until the screen appears as follows:



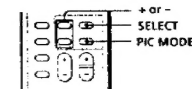
2 Press + or - to select "中文".



Note

- You can also use VOLUME +/- on the TV to select the on-screen display language.

Adjusting the picture and sound

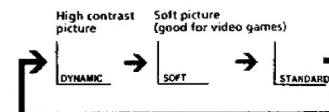


Selecting the picture mode

Press PIC MODE until the mode you want appears.



Each time you press PIC MODE, the screen changes as follows:



Note

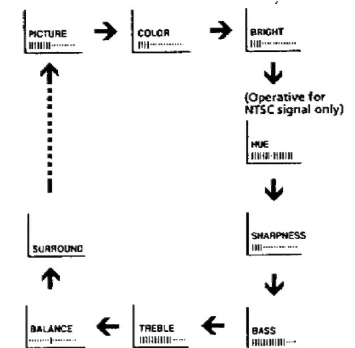
- If you change the picture mode after the following adjustments, the adjustment changes in accordance with the picture mode.

Adjusting the picture and sound settings

1 Press SELECT until the item you want to adjust appears.



Each time you press SELECT, the screen changes as follows:



2 Press + or - to adjust the item.



3 To adjust other items, repeat steps 1 and 2. (TV SYSTEM: KV-T25MF1/T25MN11 only)

Note

- You can also use VOLUME +/- on the TV to adjust the picture and sound settings.

If the color of the picture is abnormal

Press TV SYSTEM or COLOR SYSTEM or adjust the color setting until the color becomes normal.

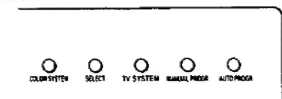
Note

- Normally set COLOR SYSTEM to AUTO

If the sound is distorted or noisy

When receiving programs through the T terminal: Press TV SYSTEM until the sound becomes clear.

Front of TV

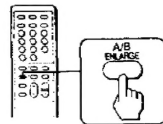


(KV-T25MN11 only)

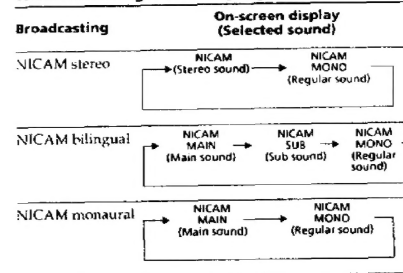
Selecting a stereo or bilingual program

Press **A/B/ENLARGE** repeatedly until you receive the sound you want.

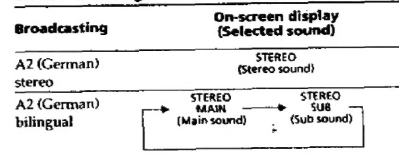
The on-screen display changes corresponding to the selected sound and the WAKE UP/STEREO indicator also lights up.



When receiving a NICAM program



When receiving a A2 (German) program



Receiving area for NICAM and A2 (German) programs

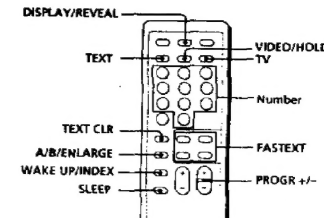
System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, etc.
A2 (German)	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy, select "regular sound." The sound becomes monaural, however, the noise will be reduced.

(KV-T25MN11/T25SF11 only)

Viewing Teletext



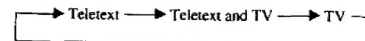
Displaying Teletext

- 1 Select a TV channel which carries the Teletext broadcast you want to watch.
- 2 Press **TEXT** to display the Teletext.
A Teletext page is displayed (normally the index page). If there is no Teletext broadcast, 100 is displayed at the top left corner of the screen.

To cancel the Teletext display, press **TV**.

Superimposing a Teletext page on the TV picture

Press **TEXT**.
Each time you press **TEXT**, the screen changes as follows:



Checking the contents of a Teletext service (INDEX)

Press **WAKE UP/INDEX** to display an overview of the Teletext contents and page numbers.

Using FASTEXT

This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT page is broadcasted, a color-coded menu appears at the bottom of the screen. The colors of the menu correspond to the RED, GREEN, YELLOW, and CYAN buttons on the remote commander.

Press the color button which corresponds to the color-coded menu.

The page is displayed after a few seconds.

Selecting a Teletext page

To input the three-digit page number of the Teletext page, press the number buttons.
If you make a mistake, key in the correct page number again.

To access the next or previous page, press **PROGR +/-**.

Holding a Teletext page (subpage)

Press **VIDEO/HOLD**.

The HOLD symbol "Ⓢ" is displayed at the top left corner of the screen.

To resume normal Teletext operation, press **VIDEO/HOLD** again or **TEXT**.

Revealing concealed information

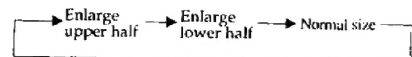
Press **DISPLAY/REVEAL**.

To conceal the information, press **DISPLAY/REVEAL** again.

Enlarging the Teletext display

Press **A/B/ENLARGE**.

Each time you press **A/B/ENLARGE**, the Teletext display changes as follows:



Waiting for a Teletext page while watching a TV program (TEXT CLEAR)

- 1 Key in the page number of the Teletext that you want to refer, then press **TEXT CLR**.
- 2 When the page number is displayed on the screen, press **TEXT** to switch the Teletext on.

Troubleshooting

If you have any problems, read this manual again and check the countermeasure for each of the symptoms listed below.
If the problem persists, contact your nearest authorized service center or dealer.

Snowy picture Noisy sound



- Check the antenna.
- Check the antenna connection on the TV and on the wall.
- Check the TV SYSTEM setting.
(KV-T25MF1/T25MN11 only)

Dotted lines or stripes



- This may be caused by local interference (e.g. cars, neon signs, hair dryers, etc.).
- Adjust the antenna for minimum interference.

Double images or "ghosts"

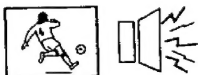


- This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

Note on the remote commander

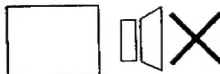
- The supplied remote commander is used on several models of the TV. If you do not find instructions for some controls that are on the remote commander, that means your TV does not employ the features of those controls, e.g. TEXT.

Good picture Noisy sound



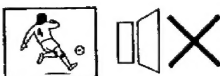
- Check the TV SYSTEM setting.
(KV-T25MF1/T25MN11 only)

No picture No sound



- Press POWER.
- Check the antenna connection.
- Check the VCR connections.
- Check the power cord connection.
- Check the standby mode.

Good picture No sound



- Press VOLUME +.
- Press MUTING.

No color



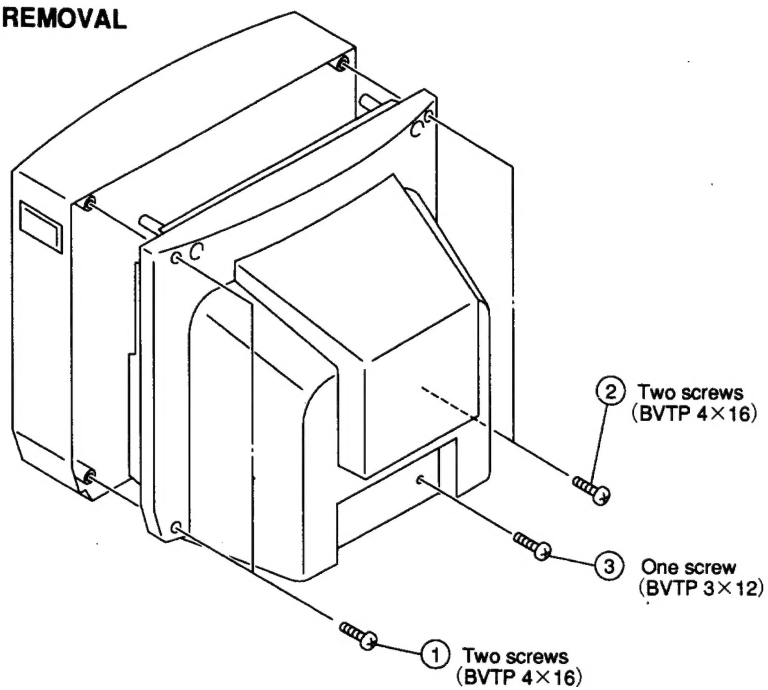
- Adjust the COLOR level in the on-screen display.
- Check the COLOR SYSTEM setting.

TV cabinet creaks

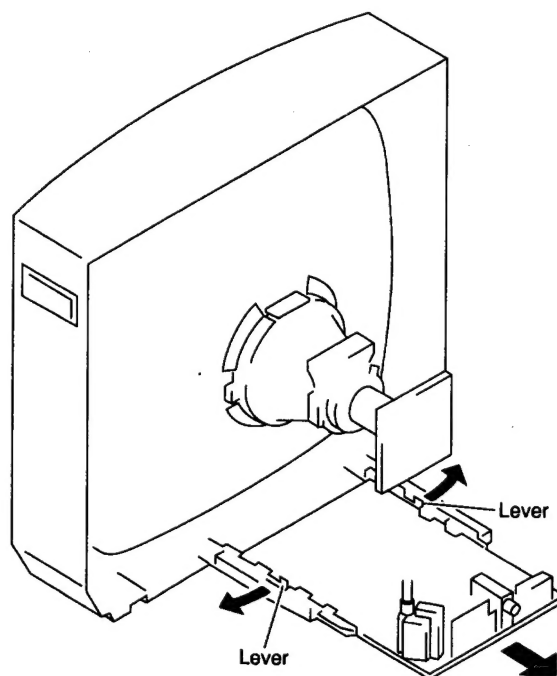
- Even if the picture or the sound is normal, changes in the room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.

SECTION 2 DISASSEMBLY

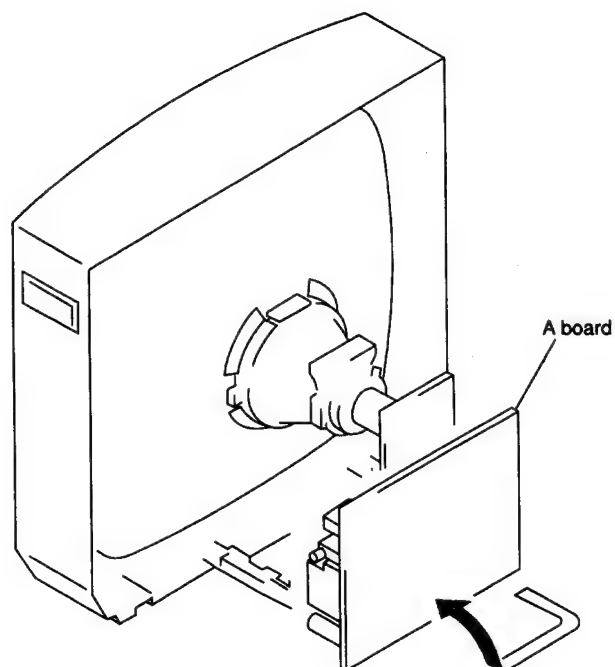
2-1. REAR COVER REMOVAL



2-2. A BOARD REMOVAL



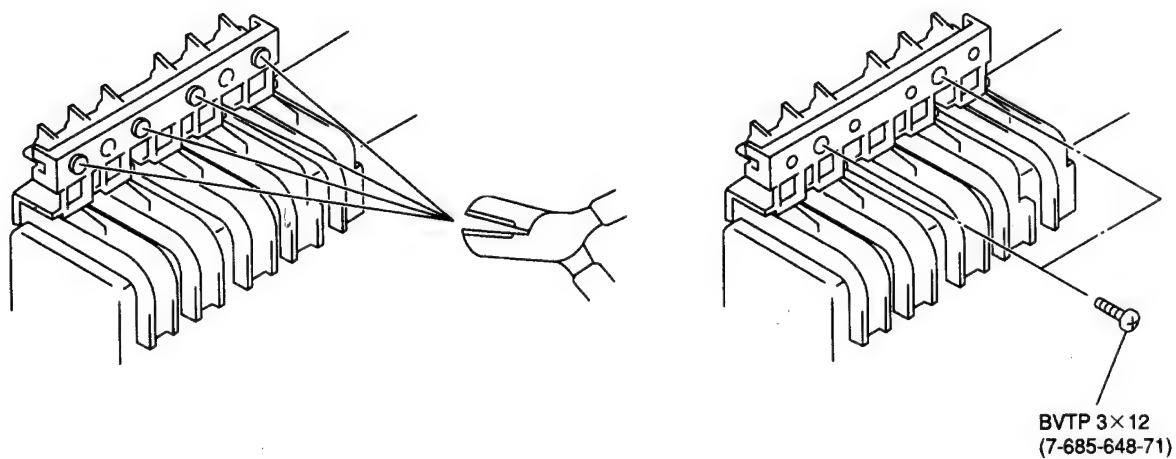
2-3. SERVICE POSITION



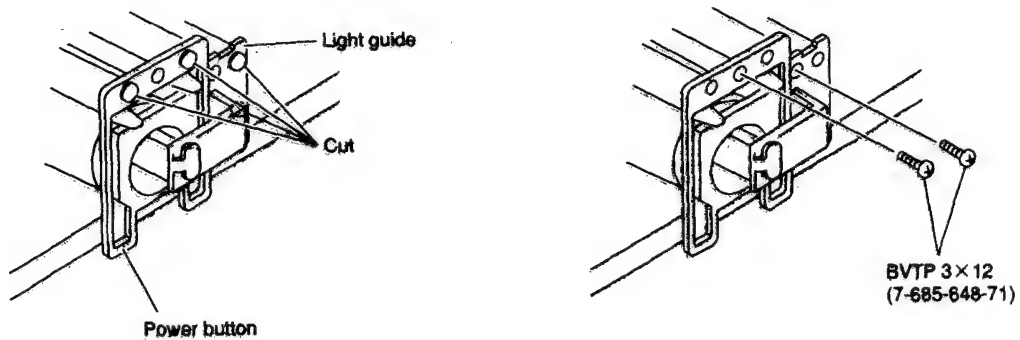
2-4. REPLACEMENT OF PARTS

For replacement of the Multi Button, Power Button and Light Guide, cut the welded portions from them, exchange with the new parts, and fix them with screws (+BVTP) respectively.

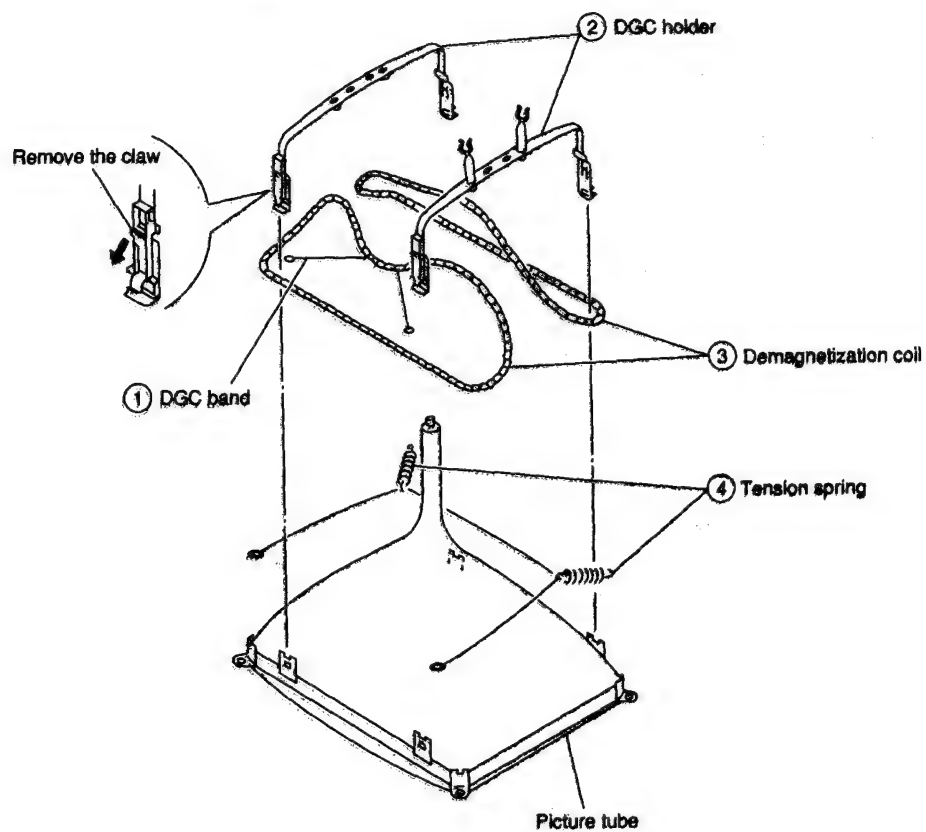
2-4-1. REPLACEMENT OF MULTI BUTTON



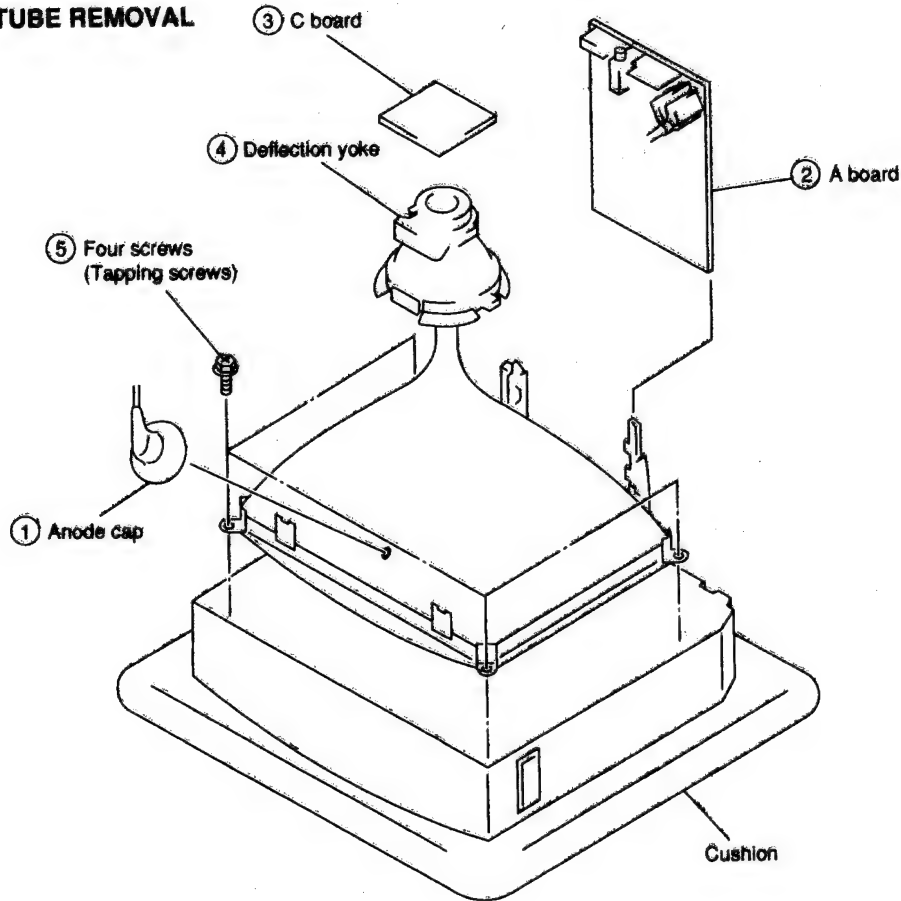
2-4-2. REPLACEMENT OF LIGHT GUIDE, POWER BUTTON



2-5. DEMAGNETIZATION COIL REMOVAL



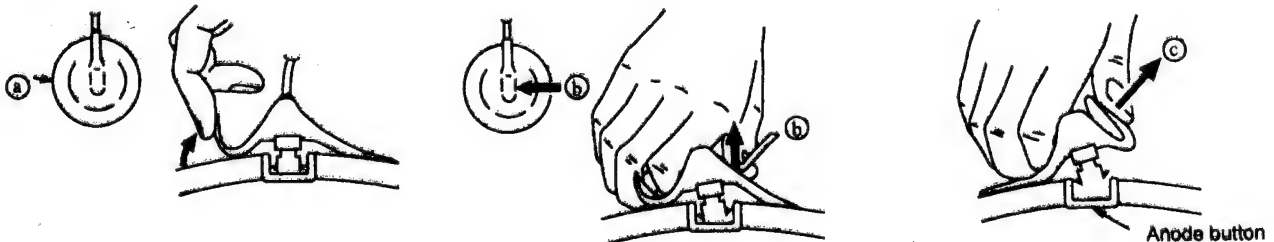
2-6. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

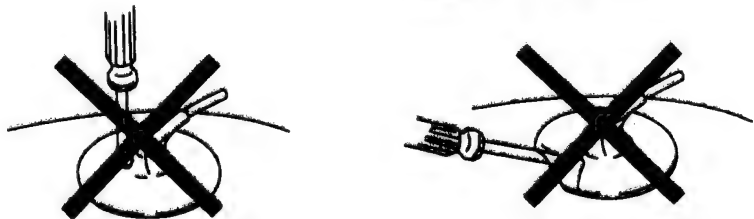
• REMOVING PROCEDURES



- ① Turn up one side of the rubber cap in the direction indicated by the arrow ①.
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material
- ② Don't press the rubber hardy not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardy!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3 SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted :

PICTURE control normal
BRIGHTNESS control normal

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
Contrast } normal
Brightness }
2. Set the pattern generator raster signal to green.
3. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side.
(See Figures 3-1 through 3-3.)
4. Move the deflection yoke forward and adjust so that entire screen is green. (See Figure 3-1.)
5. Switch the raster signal to blue, then to red and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it.
(See Figure 3-4.)

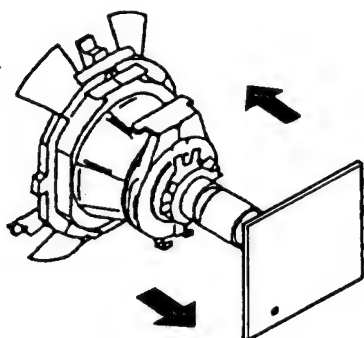


Fig. 3-1

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

Purity control

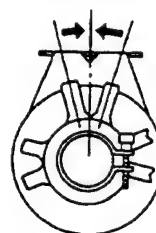


Fig. 3-2

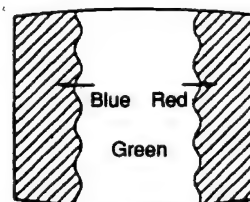


Fig. 3-3

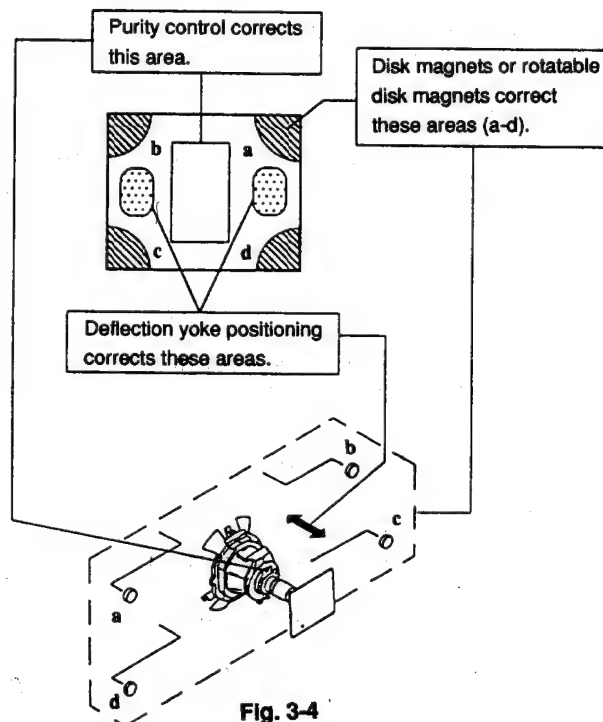


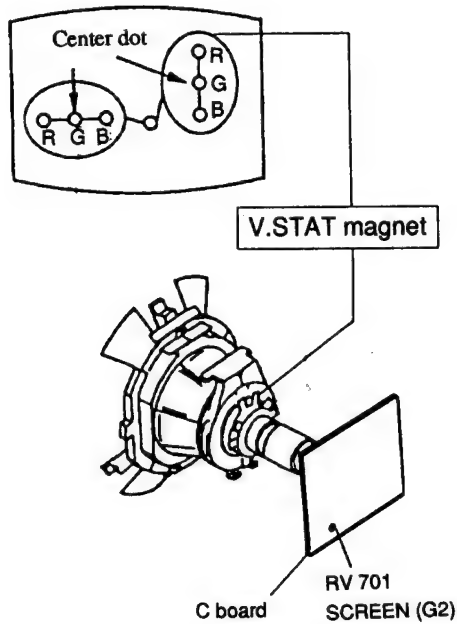
Fig. 3-4

3-2. CONVERGENCE

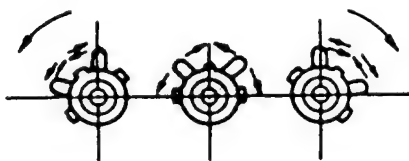
Preparations :

- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

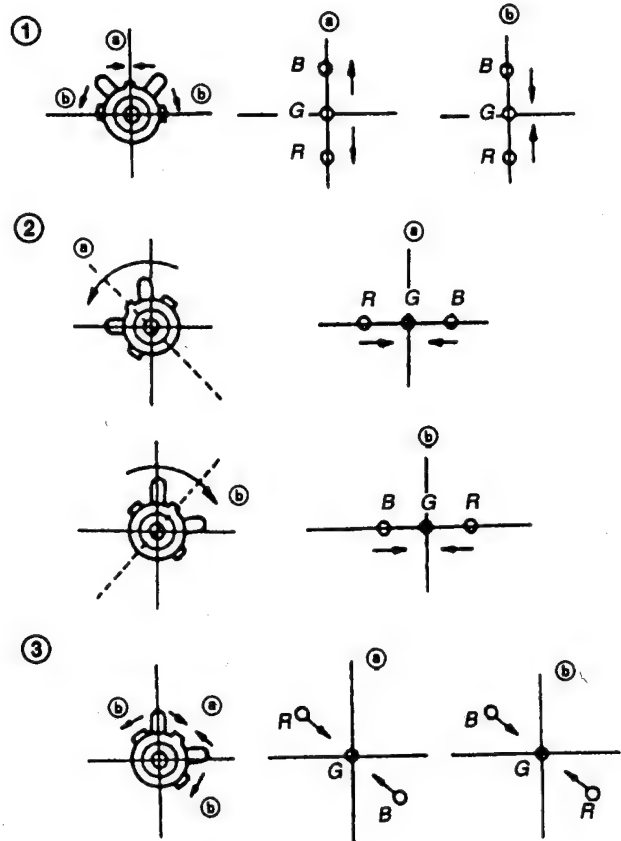
(1) Horizontal and Vertical Static Convergence



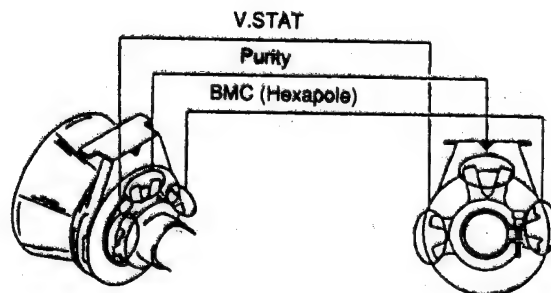
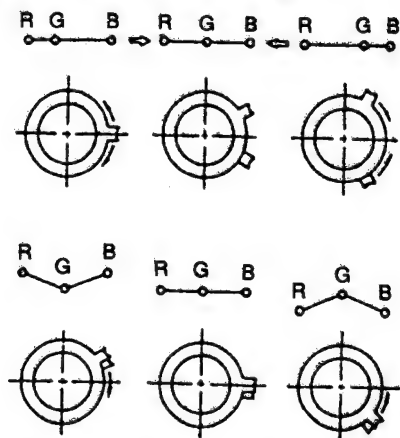
1. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
 2. (Moving horizontally), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



3. If the V.STAT magnet is moved in the direction of the ㊸ and ㊹ arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet.

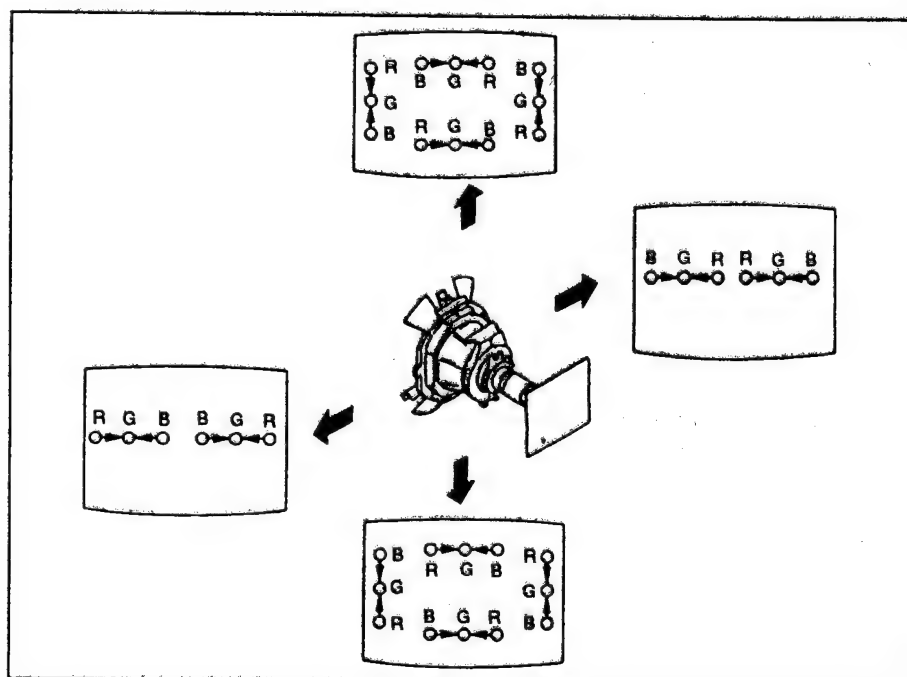


- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking. Use the V.STAT magnet to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

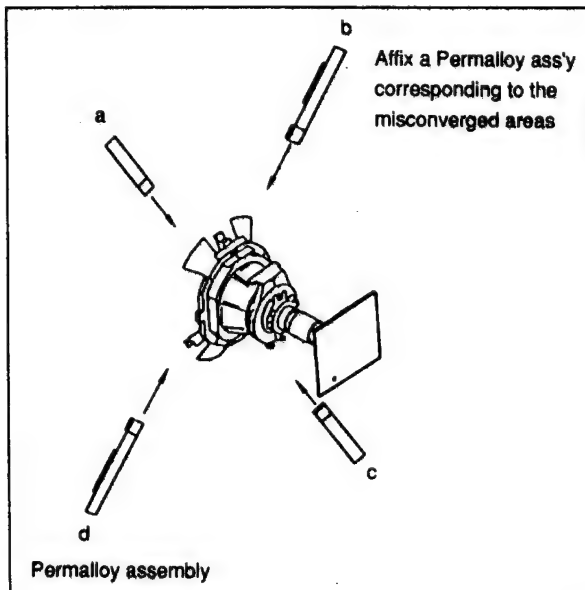
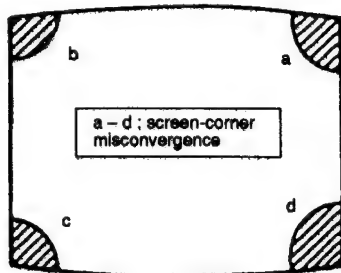
(2) Dynamic Convergence Adjustment

Preparations :

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
1. Slightly loosen the deflection yoke screws.
 2. Remove the deflection yoke spacer.
 3. Move the deflection yoke as shown in the figure below and optimize the convergence.
 4. Tighten the deflection yoke screws.
 5. Install the deflection yoke spacer.

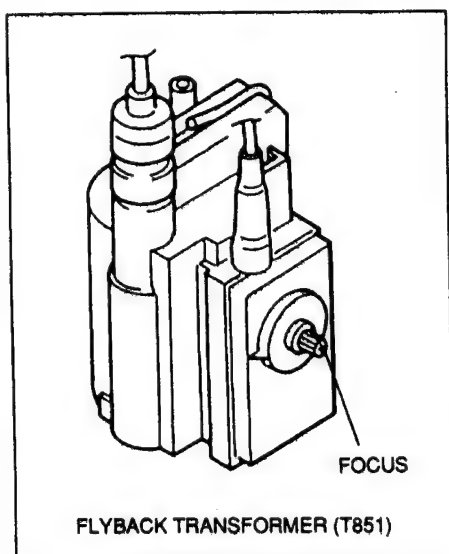


(3) Screen-corner Convergence



3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.



a. AN ITEM OF ADJUSTMENT

Item number	Adjustment item	Initial DATA	Note
09	RDR	25	WHITE POINT R
0A	GDR	20	WHITE POINT G
0B	BDR	20	WHITE POINT B

b. METHOD OF CANCELLATION FROM SERVICE MODE

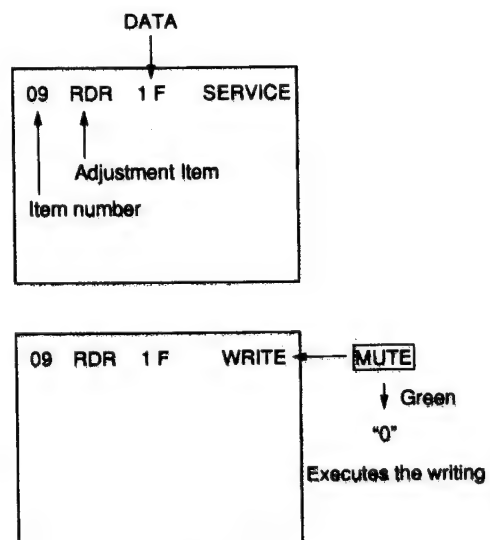
Set the standby condition (Press **POWER** button on the commander) in the next place, press **POWER** button again, hereupon it becomes TV mode.

c. METHOD OF WRITE FOR MEMORY

- 1) Set to Service Mode.
- 2) Press **[1]** (UP) and **[4]** (DOWN), select an item of adjustments.
- 3) Press **MUTE** button indicate WRITE (Green) on screen.
- 4) Press **[0]** button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

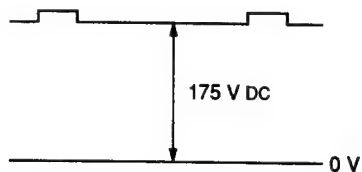
- 1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again, confirm they were adjusted.



3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT (RV701)

- 1) Set the PICTURE and BRIGHTNESS to normal.
- 2) Put to VIDEO input mode without signals.
- 3) Connect R, G, and B of the C board cathode to the oscilloscope.
- 4) Adjust G2 (RV701) volume to the value below.



2. WHITE BALANCE ADJUSTMENTS

- 1) Set the Service Mode.
- 2) Input an entire white signal.
- 3) Set the PICTURE to maximum.
- 4) Select RDR(09) with **[1]** and **[4]**, and then set the level to 25 with **[3]** and **[6]**.
- 5) Select GDR(0A) and BDR(0B) with **[1]** and **[4]** and adjust the level with **[3]** and **[6]** for the best white balance.
- 6) Write into the memory by pressing **[MUTE]** → then **[0]**.

SECTION 4 CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENTS WITH COMMANDER

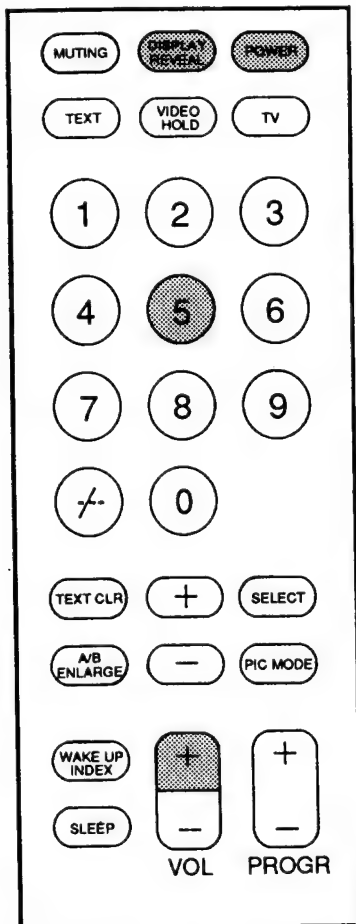
Service adjustments are made with the RM-870 that comes with this unit.

Entering service mode

With the unit on standby

↓
"DISPLAY"
↓
"5"
↓
"VOL (+)"
↓
"POWER"

The operation sequence puts the unit into service mode.

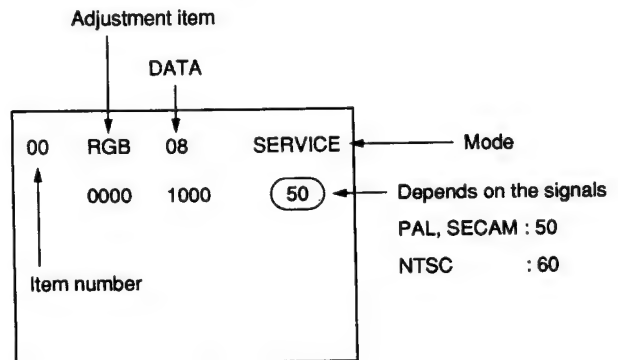


RM-870

"1", "4"	Raise/lower the service item number
"3", "6"	Raise/lower the data
"MUTING"	Writes
"0"	Executes the writing

"7", "0"	The data all becomes the values in memory
"8", "0"	User control all goes to the standard state
"5", "0"	Service data initialization (Besure not to use usually.)
"2", "0"	Write 50Hz adjustment data to 60Hz, or viceversa.

The screen display is :



"1", "4"	Select the adjustment item.
↓	
"3", "6"	Raise/lower the data.
↓	
"MUTING"	Writes
↓	
"0"	Executes the writing.

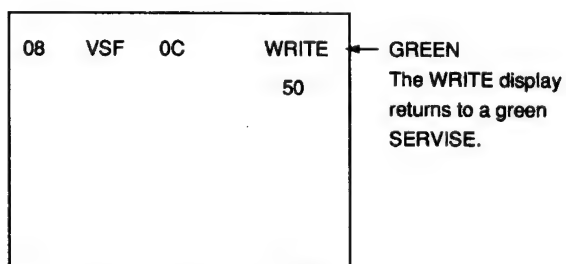
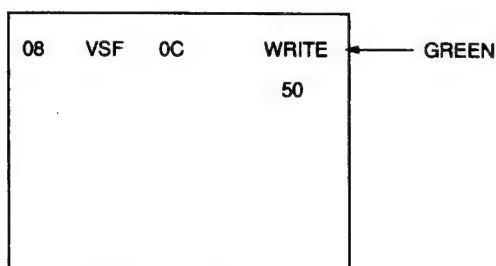
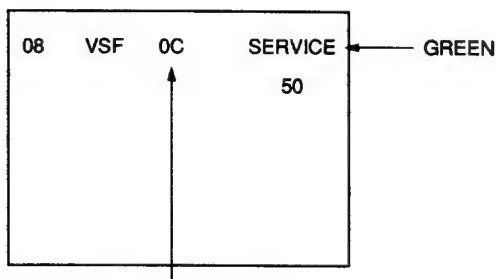
4-2. ADJUSTMENT METHOD

Item Number 08

This explanation uses V-SHIFT as an example.

1. Select 08 V-SHIFT with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum state. (The standard is for OF PAL reception.)
4. Write with the MUTE button.
5. Execute the writing with the "0" button. (The WRITE display.)

Use the same method for Items Number 00-40. Use "1" and "4" to select the adjustment item, use "3" and "6" to adjust, write with "MUTE", then execute the write with "0".



Write executed with "0"

Adjustment Item Table

Item number	Adjustment Item	Data range	Initial data	Standard data		Note	Device
00	HSF	00~3F	24	50: 21	60: 26	H SHIFT	(TDA8366)
01	HSZ	00~3F	23	50: 27	60: 28	H SIZE	(TDA8366)
02	PAP	00~3F	21	50: 25	60: 25	PIN AMPLITUDE	(TDA8366)
03	CNP	00~3F	29	50: 2D	60: 2F	CORNER PIN	(TDA8366)
04	TLT	00~3F	20	50: 24	60: 20	TILT	(TDA8366)
05	VSL	00~3F	20	50: 21	60: 21	V SLOPE	(TDA8366)
06	VAP	00~3F	1D	50: 3E	60: 3F	V AMPLITUDE	(TDA8366)
07	SCR	00~3F	20	50: 29	60: 29	S CORRECTION	(TDA8366)
08	VSF	00~3F	20	50: 39	60: 3A	V SHIFT	(TDA8366)
09	RDR	00~3F	25	25 (Fix)		WHITE POINT R	(TDA8366)
0A	GDR	00~3F	20	20		WHITE POINT G	(TDA8366)
0B	BDR	00~3F	20	20		WHITE POINT B	(TDA8366)
0C	YDL	00~0F	00	00		Y DELAY ADJUSTMENT	(TDA8366)
0D	FO	00~02	00	TV: 00	VIDEO: 00	PHI-1 TIME CONSTANT	(TDA8366)
0E	AGC	00~3F	06	TV: 06	VIDEO: 06	AGC TAKE OVER	(TDA8366)
0F	VSW	00~01	01	TV: 00	VIDEO: 01	VIDEO MUTE	(TDA8366)
10	FOR	00~03	00	0		FORCED FIELD FREQ.	(TDA8366)
11	DL	00~01	00	0		INTERLACE	(TDA8366)
12	POC	00~01	00	0		SYNCHRONISATION	(TDA8366)
13	NCI	00~01	00	50: 00	60: 00	V DIVIDER MODE	(TDA8366)
14	VID	00~01	00	50: 00	60: 00	VIDEO IDENT MODE	(TDA8366)
15	HCO	00~01	00	50: 00	60: 00	EHT TRACKING MODE	(TDA8366)
16	EVG	00~01	00	50: 00	60: 00	ENABLE V GUARD	(TDA8366)
17	SBL	00~01	00	50: 00	60: 00	SERVICE BLANKING	(TDA8366)
18	PRD	00~01	00	50: 00	60: 00	OVER-VOLTAGE INPUT	(TDA8366)
19	EXP	00~03	00	00		V DEFLECTION MODE	(TDA8366)
1A	SFM	00~01	01	01		H FREQ. DURING SWON	(TDA8366)
1B	PHL	00~01	00	00		COLOR X-TAL PLL	(TDA8366)
1C	COR	00~01	00	00		NOISE CORING PEAK	(TDA8366)
1D	PMX	00~3F	20	2D		PICTURE MAX DATA	(TDA8366)
1E	SBR	00~7F	4B	53		SUB-BRIGHTNESS	(TDA8366)
1F	SHU	00~0F	07	07		SUB-HUE	(TDA8366)
20	SSH	00~03	01	TV: 01	VIDEO: 03	SUB-SHARPNESS	(TDA8366)
21	SCL	00~3F	3F	50: 3F	60: 3F	SUB-COLOR	(TDA8366)

For KV-T25L1/T25MF1/T25SF1/T25SF11 only

22	TXP	00~0F	09	09		Text Picture cont.	(SAA5281)
23	MXP	00~0F	0B	0B		Text Mix mode Pic.	(SAA5281)
24	ODL	00~FF	10	10		Power ON Delay	(CXP85200)
25	OFR	00~0F	00	00		Remo. con. RGB OUT	(CXP85200)
26	OFM	00~0F	00	00		Main power RGB OUT	(CXP85200)
27	OSH	00~3F	0A	06		OSD Position H	(CXP85200)
28	MUT	00~01	01	00		No Sync. Mute	(CXP85200)
29	ABL	00~01	01	01		Bright ABL	(CXP85200)
2A	OP0	00~FF	40	2B		Option 0	(CXP85200)
2B	OP1	00~FF	07	07		Option 1	(CXP85200)

※ 50 ... 50Hz data 60 ... 60Hz data

※ Standard data listed on the Adjustment Item Table are reference values, therefore differ per model.

KV-T25L1/T25MF1/T25MN11
KV-T25SF1/T25SF11
RM-870

For KV-T25MN11 only

Item number	Adjustment Item	Data range	Initial data	Standard data	Note	Device
22	FAW	00~FF	08	08 (Fix)	NICAM FAW Thresh	(MSP3410)
23	CTM	00~FF	08	08 (Fix)	NICAM Error Bit (MONO)	(MSP3410)
24	CTN	00~FF	50	50 (Fix)	NICAM Error Bit (NICAM)	(MSP3410)
25	WCD	00~FF	15	15	W. G. Change Data	(MSP3410)
26	WST	00~FF	50	50	W. G. Stereo Cut Point	(MSP3410)
27	WTM	00~FF	EA	EA	W. G. Timer Change	(MSP3410)
28	WBT	00~FF	01	01	W. G. BILINGUAL	(MSP3410)
29	ACG	00~01	50	50	AGC AUTO/CONST.	(MSP3410)
2A	CDB	00~7F	50	50	AGC GAIN CONST.	(MSP3410)
2B	FGP	00~7F	24	24	FM (BG, I, DK) Prescale	(MSP3410)
2C	FMP	00~7F	44	44	FM (M) Prescale	(MSP3410)
2D	WGP	00~7F	3C	3C	W. G. Prescale	(MSP3410)
2E	NIP	00~7F	7F	7F	NICAM Plescale	(MSP3410)
2F	CRM	00~01	00	00	Carrier Mute	(MSP3410)
30	ACO	00~01	01	01	Audio Clock Out	(MSP3410)
31	WAC	00~0F	01	01	W. G. Agreement count	(MSP3410)
32	TXP	00~0F	09	09	Text Picture cont.	(SAA5281)
33	MXP	00~0F	0B	0B	Text Mix mode Pic.	(SAA5281)
34	HBL	00~3F	20	20	H Blk Left Width	(CXP85200)
35	HBR	00~3F	20	20	H Blk Right Width	(CXP85200)
36	VBH	00~FF	00	00	V Blk High Width	(CXP85200)
37	VBL	00~FF	FF	FF	V Blk Low Width	(CXP85200)
38	ODL	00~FF	10	10	Power ON Delay	(CXP85200)
39	OFR	00~0F	00	00	Remo. con. RGB OUT	(CXP85200)
3A	OFM	00~0F	00	00	Main power RGB OUT	(CXP85200)
3B	OSH	00~3F	0A	0A	OSD Position H	(CXP85200)
3C	MUT	00~01	01	01	No Sync. Mute	(CXP85200)
3D	DWZ	00~01	00	00	Disable Widezoom	(CXP85200)
3E	ABL	00~01	01	01	Bright ABL	(CXP85200)
3F	OP0	00~FF	40	40	Option 0	(CXP85200)
40	OP1	00~FF	07	07	Option 1	(CXP85200)

No 2A, 3F OP0 * Input data are different according to models.

Item	—	AV Input		—	—	—	—	Saudi
KV-T25MF1	0	1	0	0	0	0	0	0
KV-T25MN11	0	1	0	0	0	0	0	0
KV-T25L1	0	0	1	0	0	0	0	0
KV-T25SF1	0	1	0	0	0	0	0	0
KV-T25SF11	0	1	0	0	0	0	0	0

No 2B, 40 OP1

Item	—	—	—	TV System		NTSC	SECAM	Chin
KV-T25MF1	0	0	0	0	0	1	1	1
KV-T25MN11	0	0	0	0	0	1	1	1
KV-T25L1	0	0	0	0	1	1	1	1
KV-T25SF1	0	0	0	0	1	1	0	1
KV-T25SF11	0	0	0	0	1	1	0	1

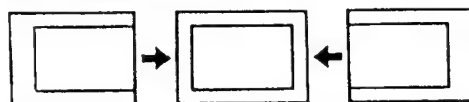
4-3. A BOARD, ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons "5" and "0" (Data Initialize), and "2" and "0" (Data Copy) to initialize the data.
3. Call each item number, and check if the respective screen shows the normal picture.
In case some items are not well-adjusted, give them fine adjustment.
Write the data per each item number (MUTE + 0).
4. Select item numbers "2A" (OP0) and "2B" (OP1) for mono, and 3F (OP0) and "40" (OP1) for STEREO, and respectively set the bit per model with command buttons "3" and "6".
5. Press commander buttons "8" and "0" (Test Normal) to return to the data that was set on the shipment from the factory.
(= Cancel Service Mode.)

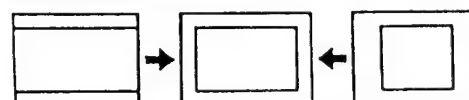
4-4. PICTURE DISTORTION ADJUSTMENT

Item Number 00 – 08

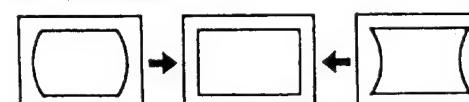
00 HSF (H.SHIFT)



01 HSZ (H SIZE)



02 PAP (PIN AMP)



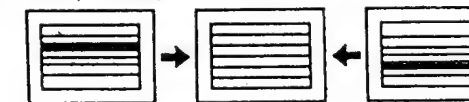
03 CNP (CORNER PIN)



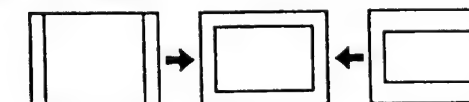
04 TLT (TILT)



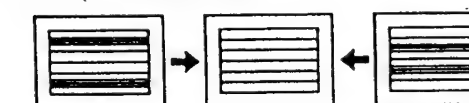
05 VSL (V SLOP)



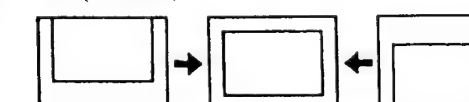
06 VAP (V AMP)



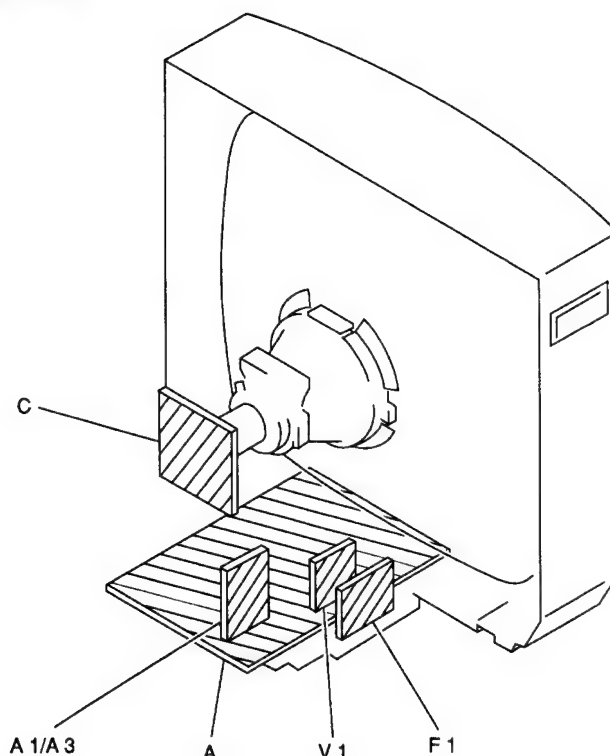
07 SCR (S CORRECTION)



08 VSF (V SHIFT)



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
 $\text{k}\Omega = 100\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4W (CHIP: 1/10W)

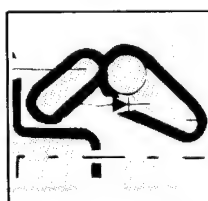
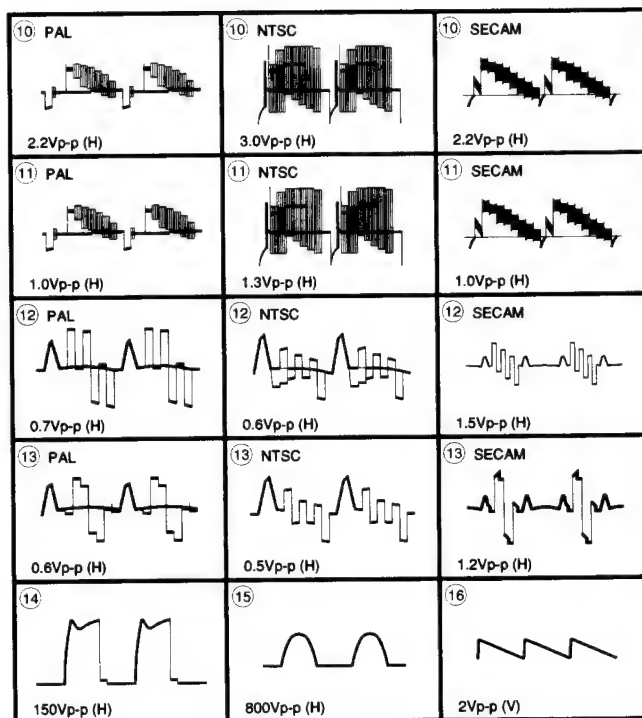
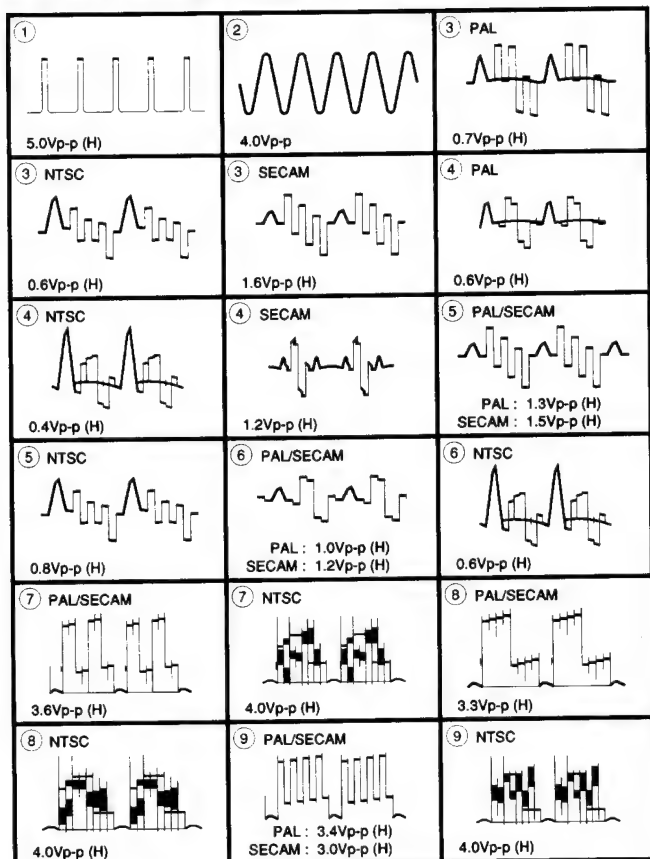
- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Readings are taken with a color-bar signal input.
no mark : PAL
() : SECAM
() : NTSC 4.43
- Readings are taken with a 10 $\text{M}\Omega$ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- * : Can not be measured.
- Circled numbers are waveform reference.
- : B + bus.
- : B - bus.
- : signal path.

Reference Information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFRAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark are critical for safety. Replace only with part number specified.

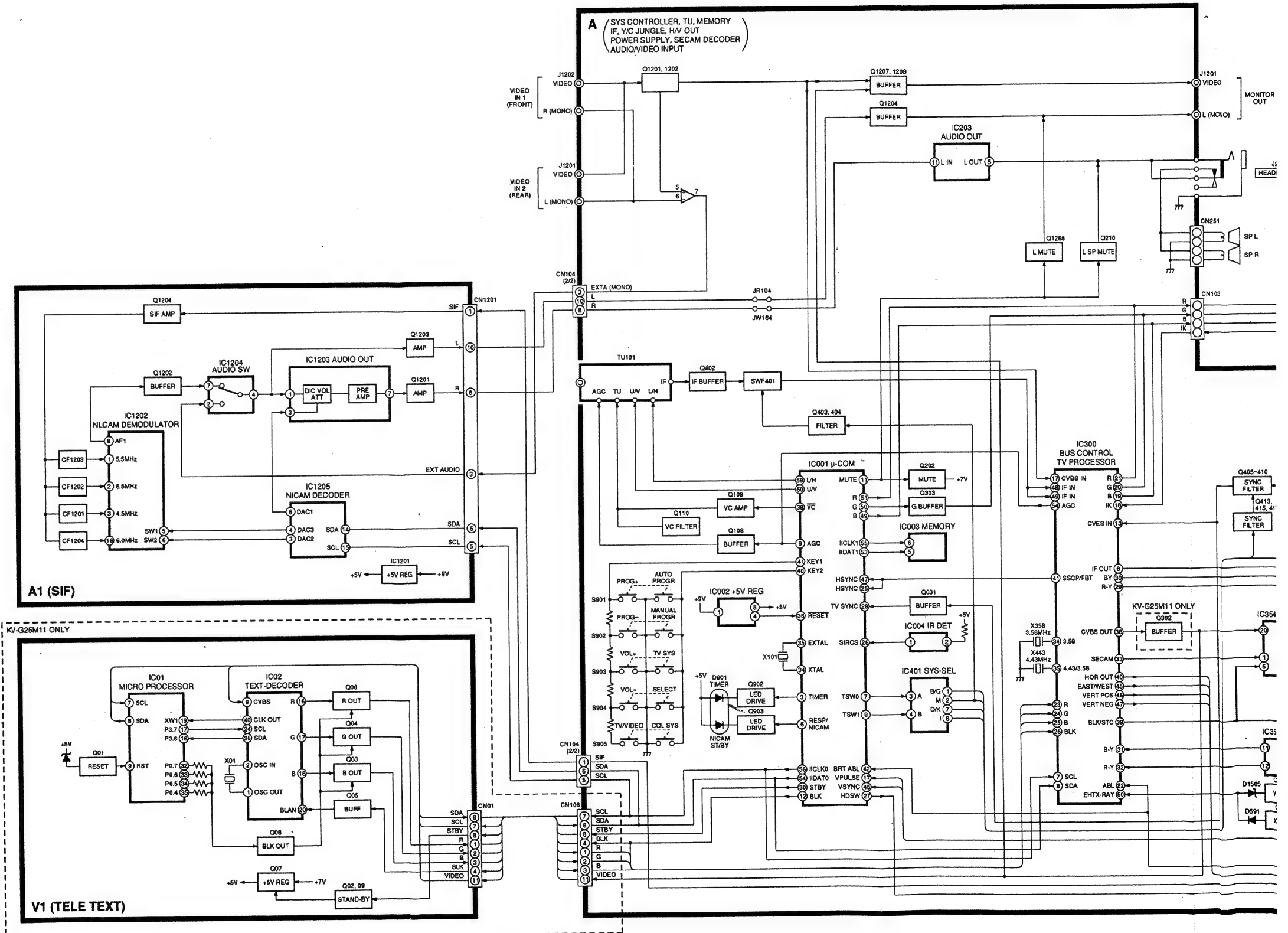
A BOARD WAVEFORMS

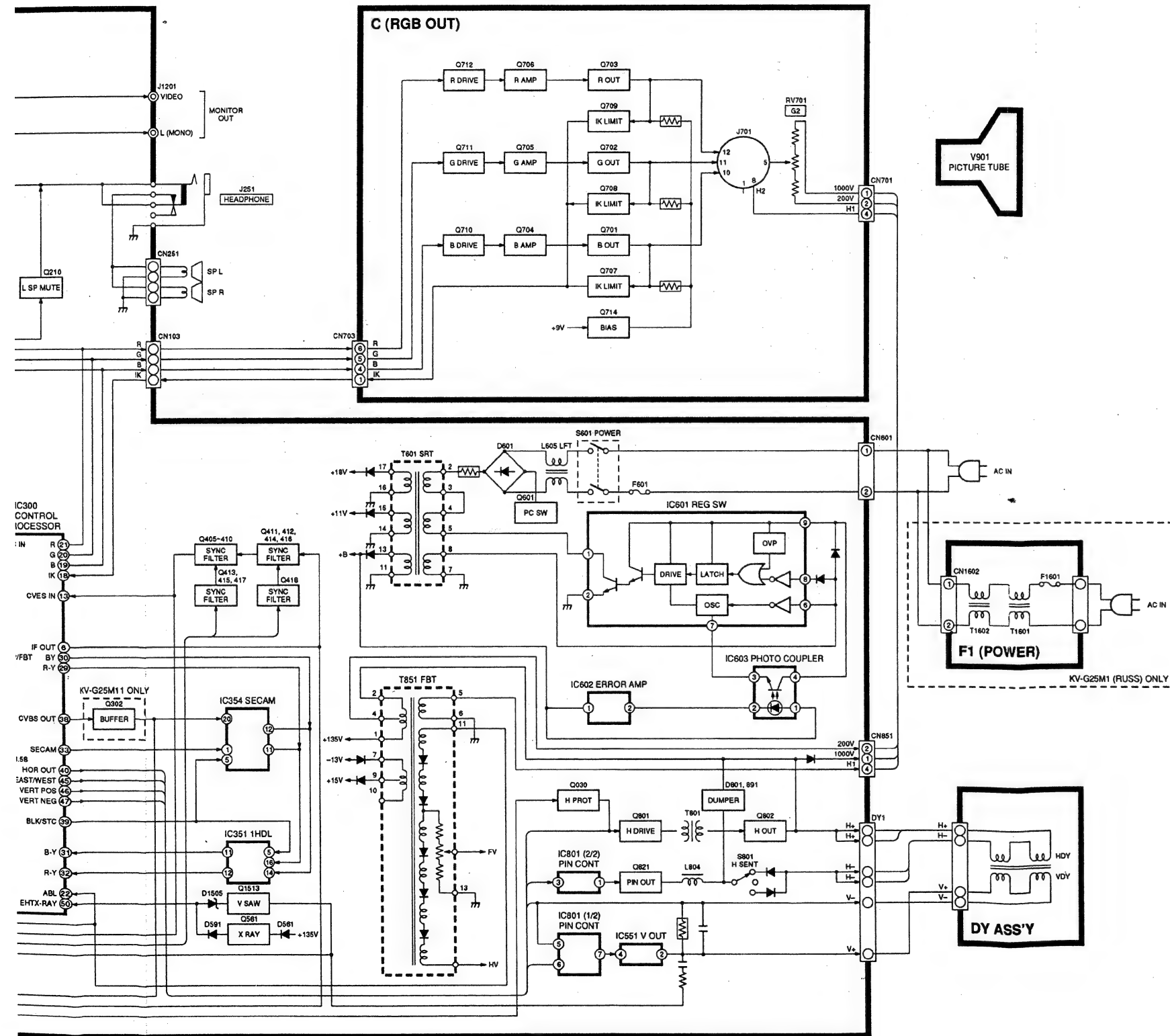


NOTE:

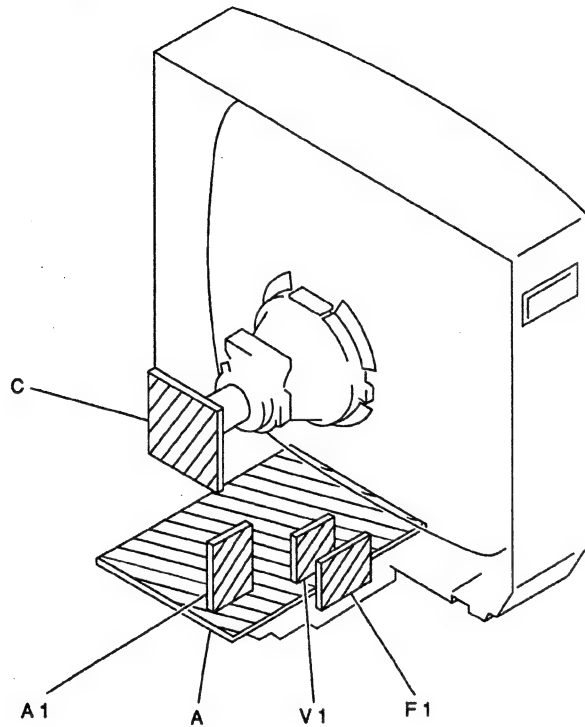
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

5-1. BLOCK DIAGRAMS





5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
 $\text{k}\Omega = 100\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Readings are taken with a color-bar signal input.
no mark: PAL
(): SECAM
< >: NTSC 4.43
- Readings are taken with a 10 $\text{M}\Omega$ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- *: Can not be measured.
- Circled numbers are waveform reference.
- : B + bus.
- - -: B - bus.
- : signal path.

Reference Information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFRAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
	: LF-8L	MICRO INDUCTOR
	: TA	TANTALUM
COIL	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE
CAPACITOR		

Note: The component identified by shading and mark are critical for safety. Replace only with part number specified.

PRINTED WIRING BOARD

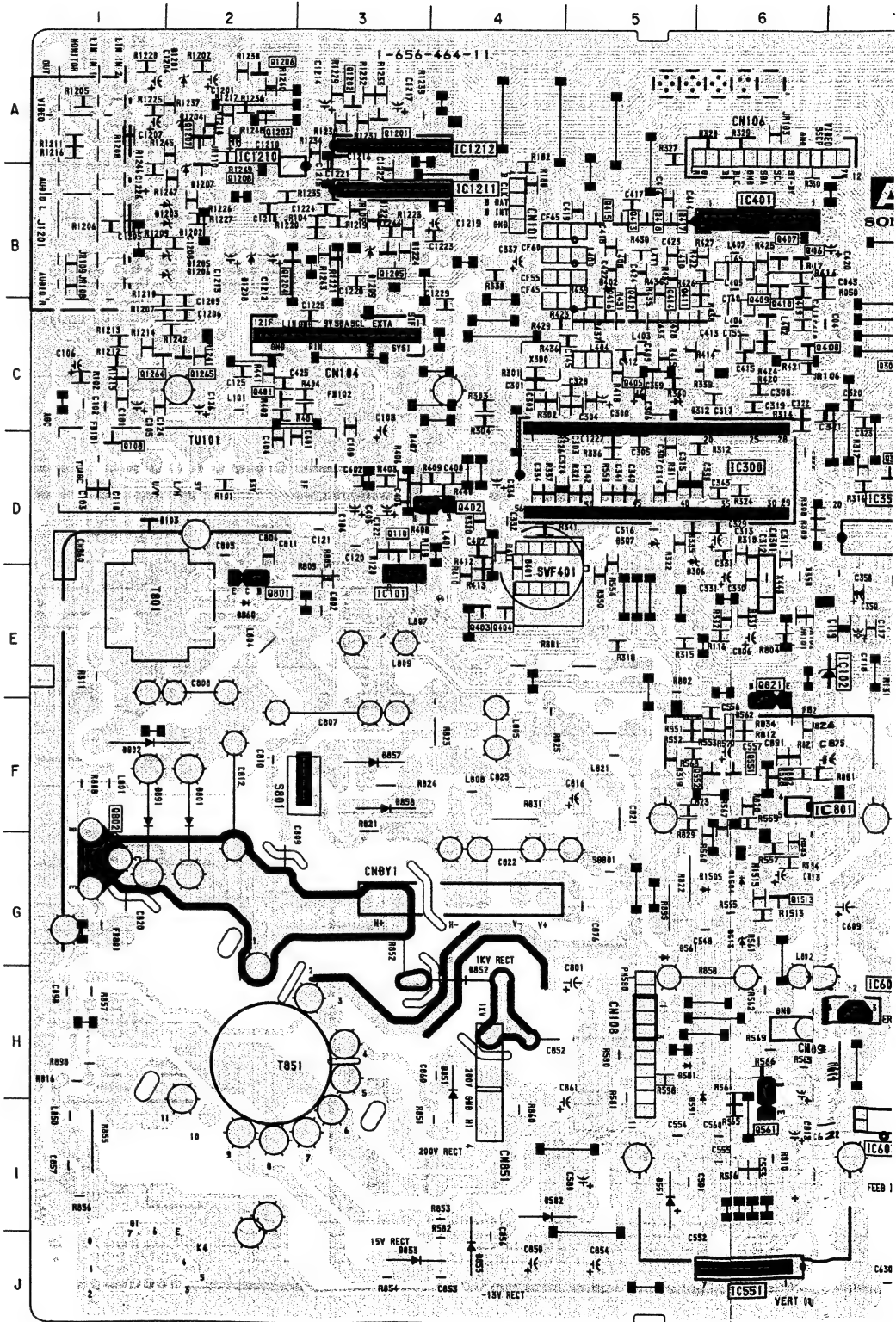
A

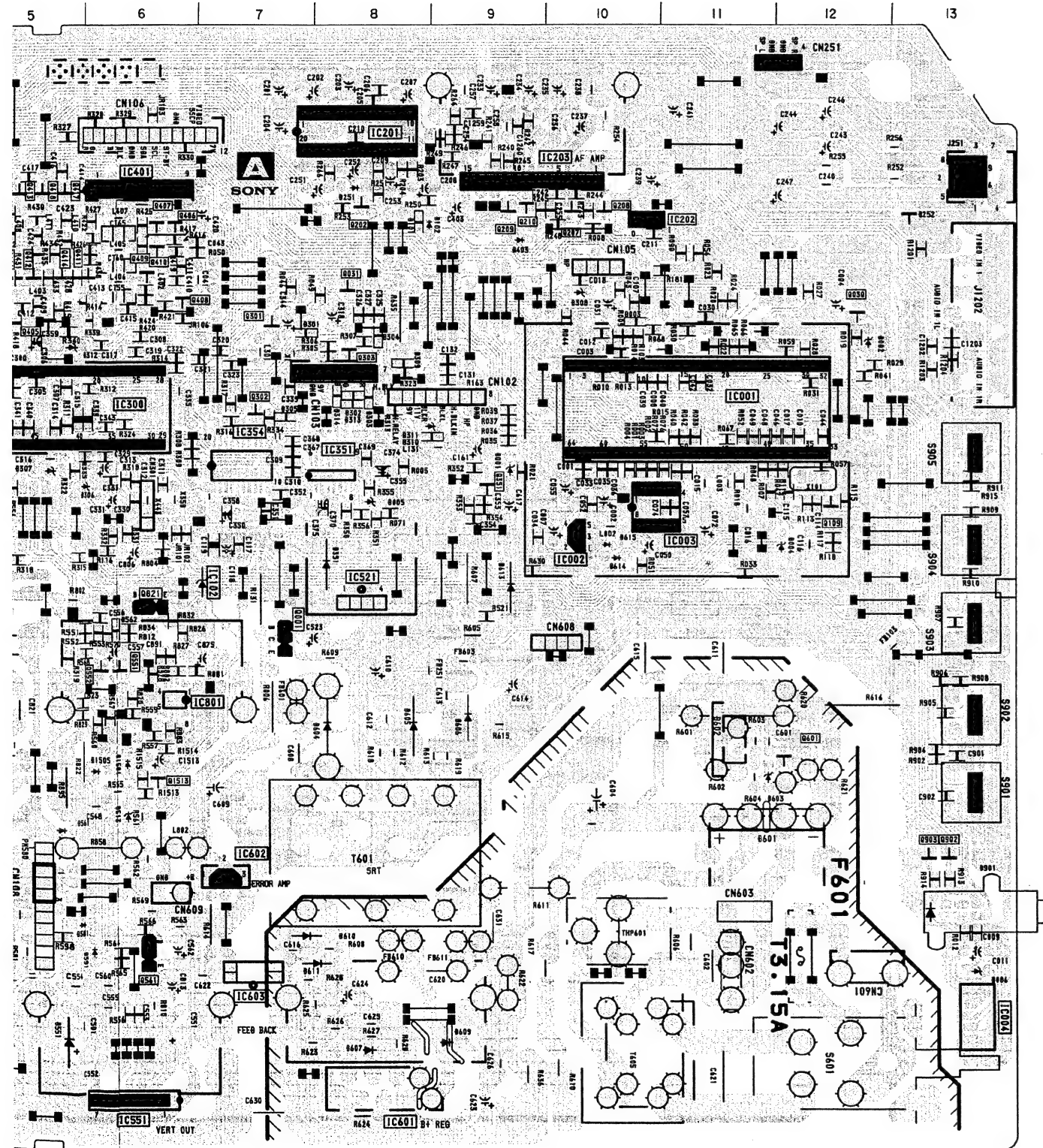
[SYS CONTROLLER, TU, MEMORY, IF, Y/C JUNGLE
H/V OUT, POWER SUPPLY, SECAM DECODER, AUDIO/VIDEO INPUT]

A BOARD

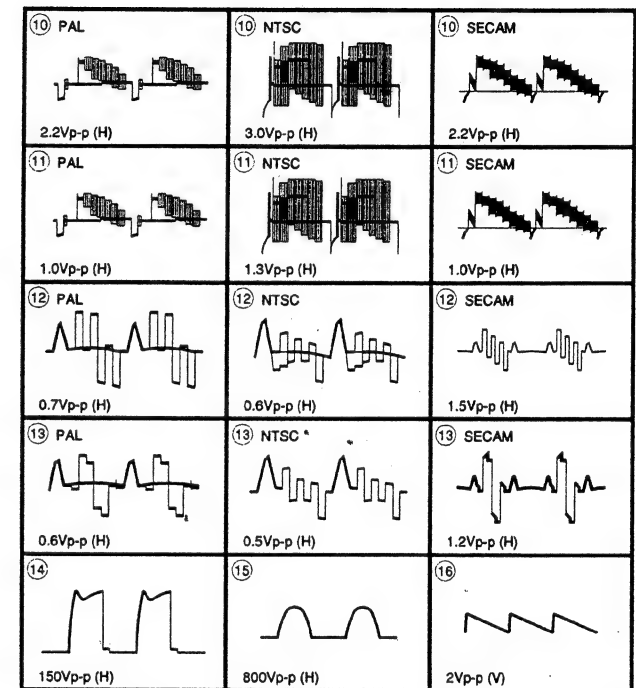
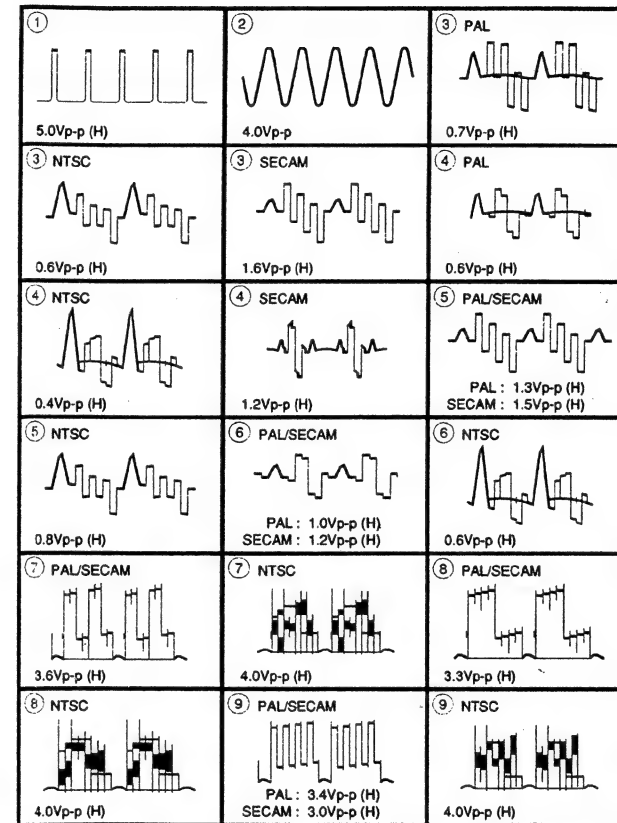
IC		Q1208 B-2 Q1265 C-2 Q1513 G-6	
		DIODE	
IC001	D-11	D001	D-9
IC002	E-10	D002	C-12
IC003	E-11	D003	C-10
IC004	I-13	D004	E-12
IC102	E-7	D005	E-8
IC203	B-10	D101	B-8
IC300	D-6	D102	B-9
IC351	D-8	D103	D-1
IC354	D-7	D251	B-8
IC401	B-6	D252	B-13
IC521	E-8	D301	C-7
IC551	J-6	D302	D-8
IC601	J-8	D303	D-8
IC602	H-7	D304	C-8
IC603	I-7	D305	D-7
IC801	F-6	D306	D-6
IC1210	A-2	D307	D-5
		TRANSISTOR	
Q030	C-12	D308	C-10
Q031	C-8	D310	D-8
Q108	D-1	D311	D-8
Q109	E-12	D312	C-5
Q110	D-3	D313	D-8
Q202	B-8	D314	D-8
Q207	B-10	D351	E-8
Q208	B-10	D401	D-4
Q210	B-9	D402	B-5
Q301	C-7	D403	B-9
Q302	D-7	D513	G-6
Q303	C-8	D551	I-5
Q402	D-4	D561	G-5
Q403	E-4	D591	H-6
Q404	E-4	D601	G-11
Q405	C-5	D602	G-11
Q406	B-6	D603	G-11
Q407	B-6	D604	G-8
Q408	C-6	D605	G-8
Q409	C-6	D606	F-9
Q410	B-6	D607	I-8
Q411	C-6	D609	I-9
Q412	C-5	D610	H-7
Q413	B-5	D611	I-8
Q414	C-5	D801	F-2
Q415	B-5	D802	F-1
Q416	C-5	D851	H-4
Q417	B-5	D852	H-4
Q418	B-5	D853	J-3
Q561	I-6	D855	J-4
Q601	G-12	D857	F-3
Q801	E-2	D858	F-3
Q802	G-1	D860	E-2
Q821	E-6	D891	F-1
Q902	H-13	D901	H-13
Q903	H-13	D1201	A-2
Q1201	A-3	D1202	B-2
Q1202	A-3	D1207	B-2
Q1203	A-2	D1208	B-2
Q1204	B-2	D1504	G-6
Q1207	A-2	D1505	G-6

- A Board -





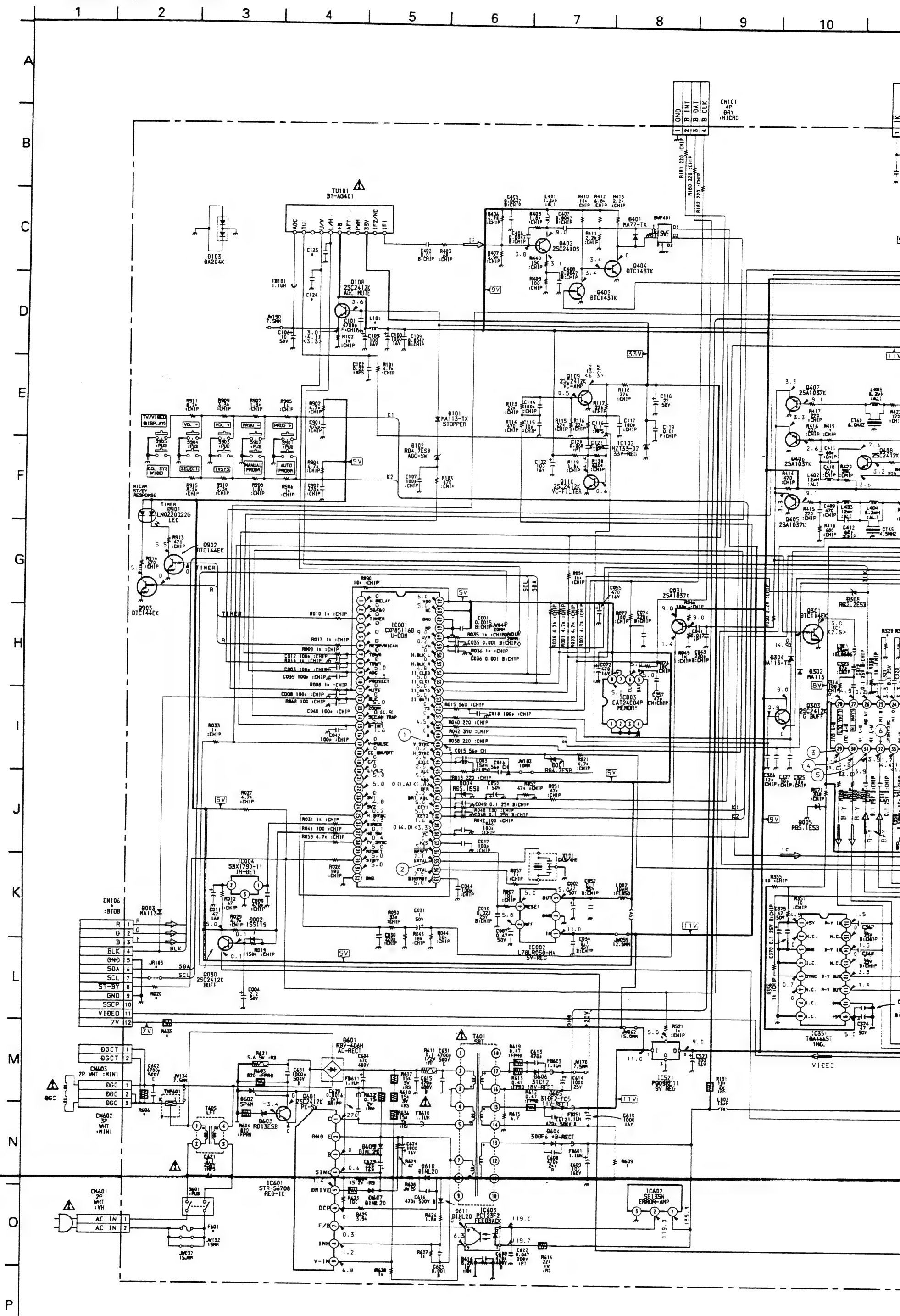
A BOARD WAVEFORMS

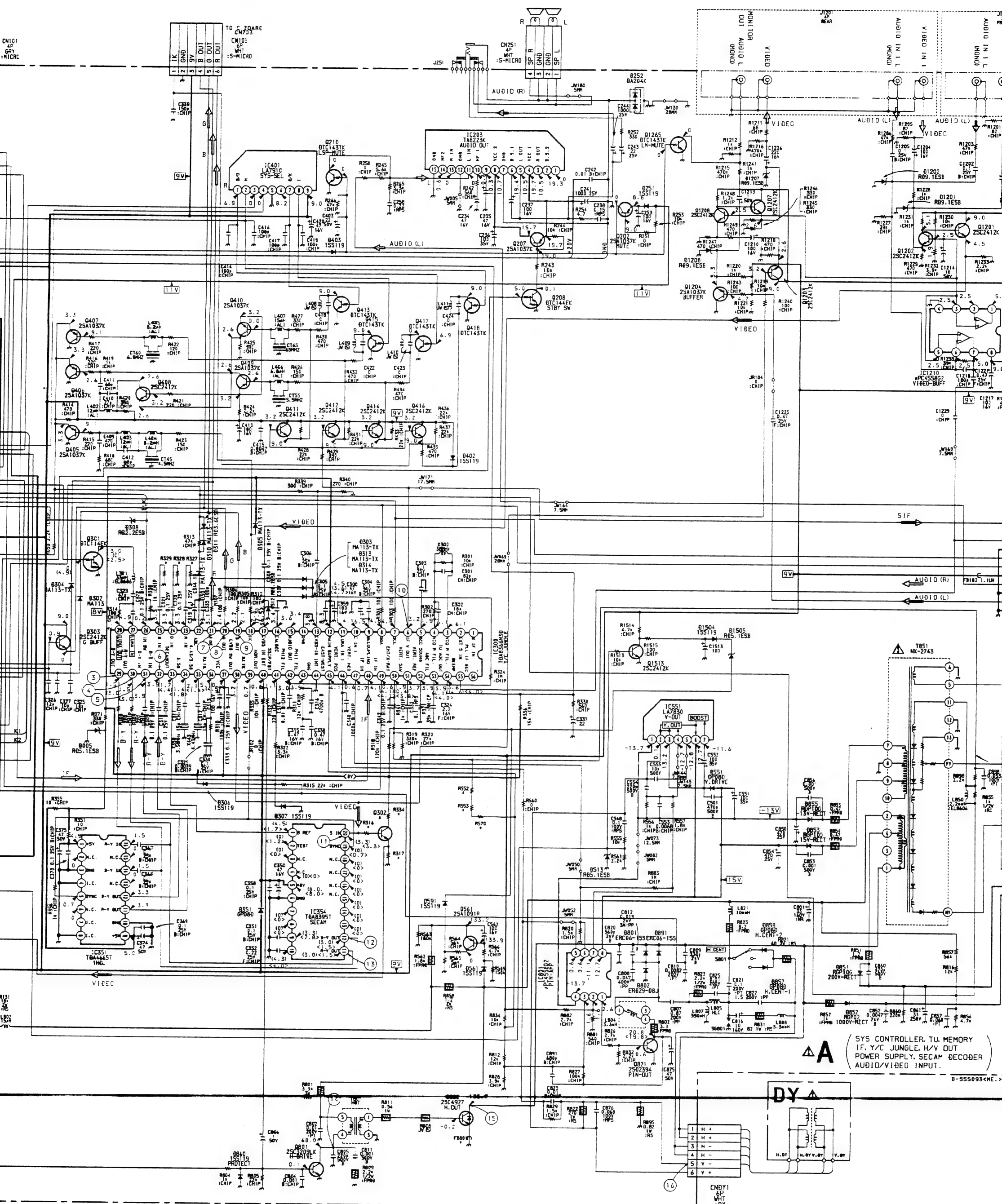


NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

(1) Schematic Diagram of A Board



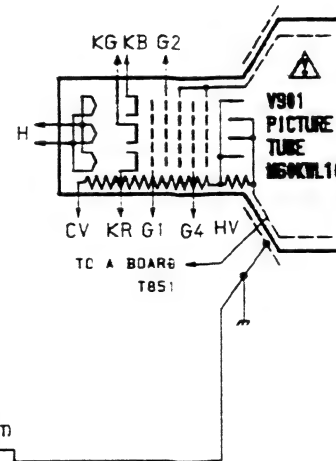
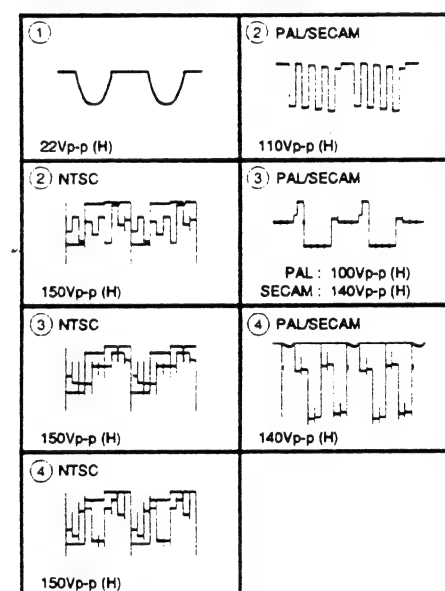
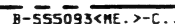
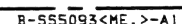


	KV-G25M1(ME)	KV-G25M1(HK)	KV-G25M1(RUSS)	KV-G25M11
CN106	NOT USED	NOT USED	NOT USED	12P : BTOB
CN601	TO POWER CORD	TO POWER CORD	TO F1 BOARD CN1602	TO POWER CORD
F601	T3.15A	T3.15A	NOT USED	T3.15A
FB801	1.1uH	1.1uH	1.9uH	1.1uH
JR103	NOT USED	NOT USED	NOT USED	0 : CHIP
JW032	NOT USED	NOT USED	15MM	NOT USED
JW132	NOT USED	NOT USED	15MM	NOT USED
Q302	NOT USED	NOT USED	NOT USED	2SC2412K
R020	NOT USED	NOT USED	NOT USED	100 : CHIP
R316	NOT USED	NOT USED	NOT USED	4.7K : CHIP
R317	NOT USED	NOT USED	NOT USED	1K : CHIP
R327	0 : CHIP	0 : CHIP	0 : CHIP	100 : CHIP
R328	0 : CHIP	0 : CHIP	0 : CHIP	100 : CHIP
R329	0 : CHIP	0 : CHIP	0 : CHIP	100 : CHIP
R334	NOT USED	NOT USED	NOT USED	470 : CHIP
R552	NOT USED	NOT USED	220K : CHIP	220K : CHIP
R553	NOT USED	NOT USED	0 : CHIP	0 : CHIP
R570	NOT USED	NOT USED	0 : CHIP	0 : CHIP
R635	NOT USED	NOT USED	NOT USED	22 2W :RS

The block diagram of the TDA4665 integrated circuit illustrates the internal signal processing architecture. It features two parallel channels for colour-difference signals, each starting with a 'SIGNAL CLAMPING' block (pins 13 and 14). These signals pass through 'pre-amplifiers' and 'LINE MEMORY' blocks before being sampled and held by 'SAMPLE AND HOLD' blocks. The sampled signals then pass through low-pass ('LP') filters and are finally output through 'output buffers' (pins 11 and 12). A 'broadcast pulse input' (pin 5) is processed by a 'BROADCAST PULSE DETECTOR' and a 'FREQUENCY PHASE DETECTOR', which then feeds into a 'DIVIDER BY 192' and a 'DIVIDER BY 2'. The 'DIVIDER BY 192' provides a '32kHz shifing clock' to the 'SAMPLE AND HOLD' blocks. The 'DIVIDER BY 2' feeds into a 'SAMPLING CCG' block. The circuit is powered by 'Vcc' (pin 9) and a 'digital supply' (pin 1). Ground connections are marked as GND1 (pin 10) and GND2 (pin 3). Pin 4 is also shown as a ground connection. The TDA4665 is a monolithic integrated circuit designed for video processing, specifically for colour-difference signals.

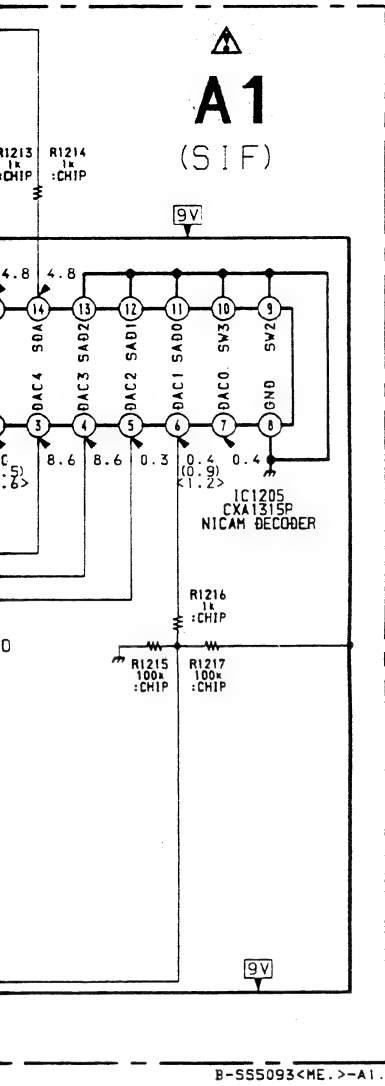
[illegible]

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11

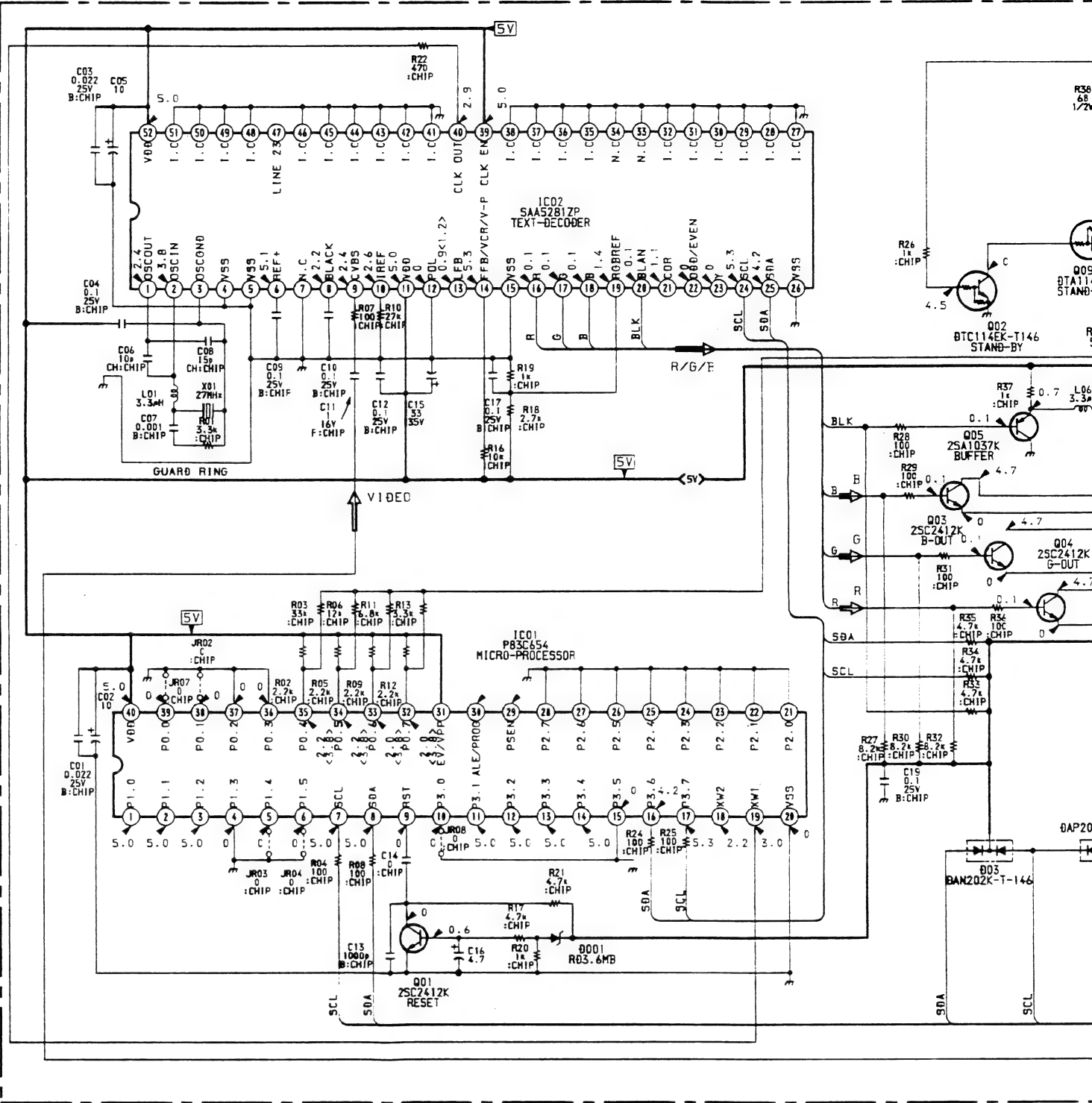
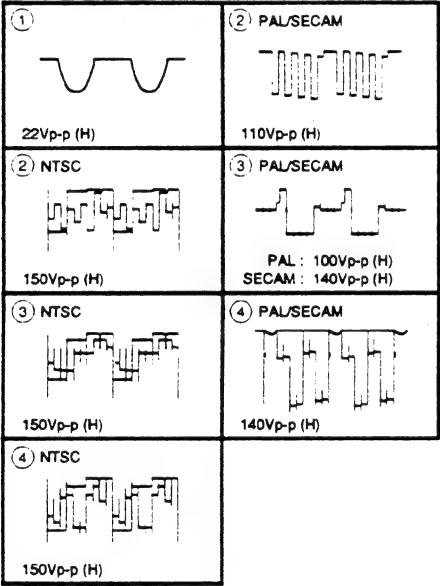


Schematic diagrams

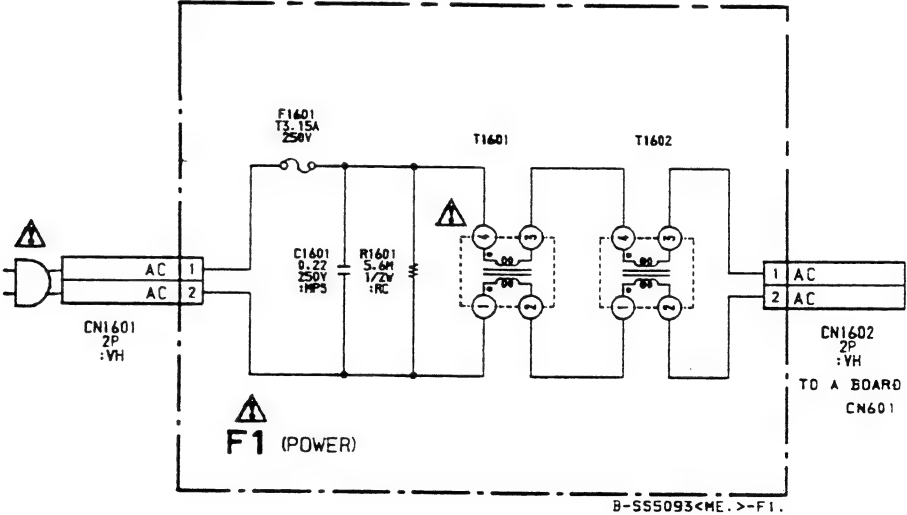
(KV-G25M11 only)



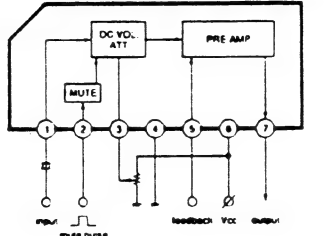
C BOARD WAVEFORMS



(KV-G25M1 (RUSS) only)

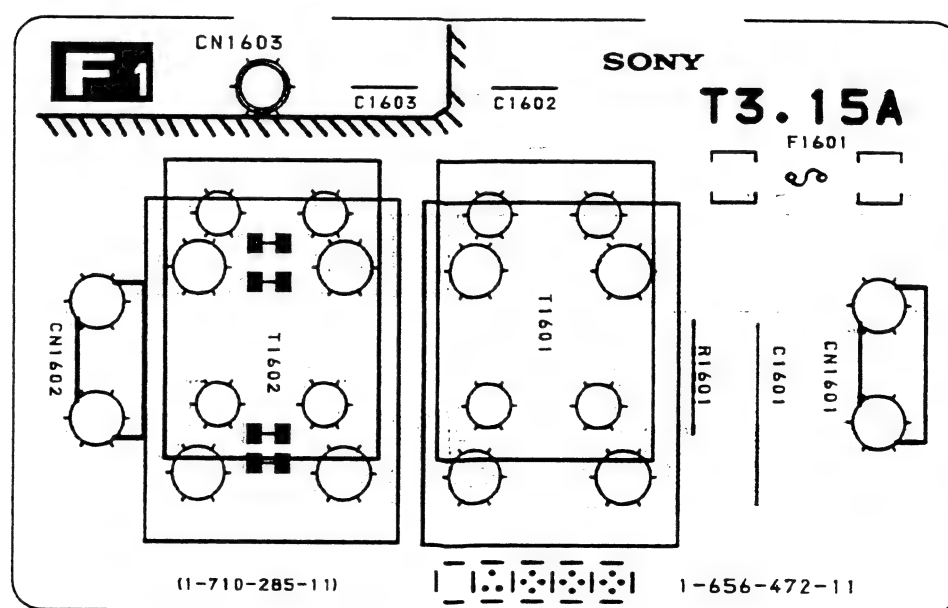
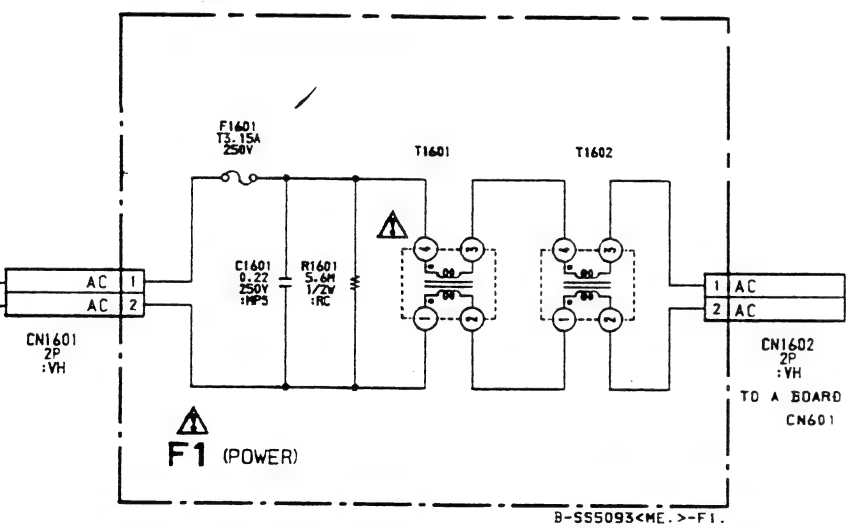


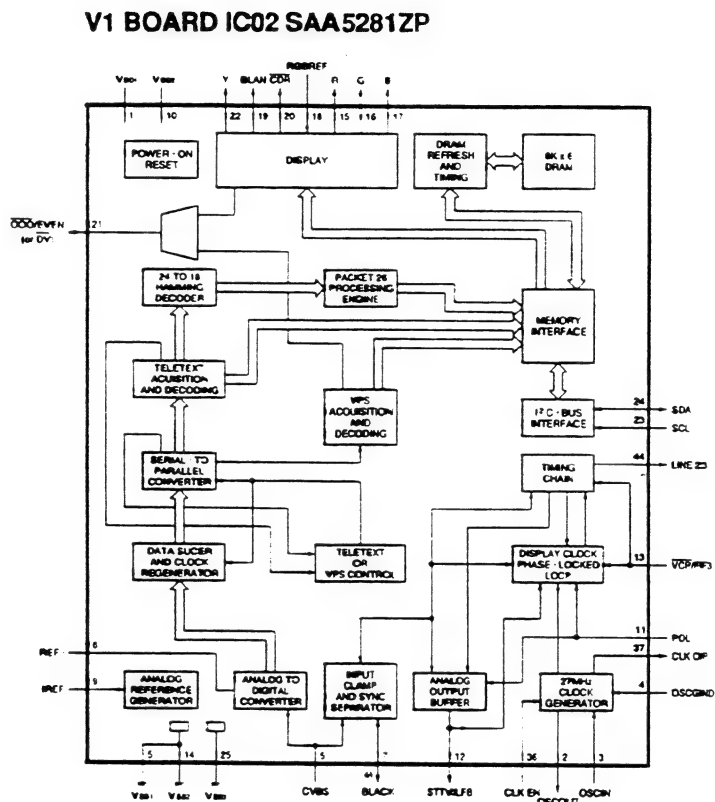
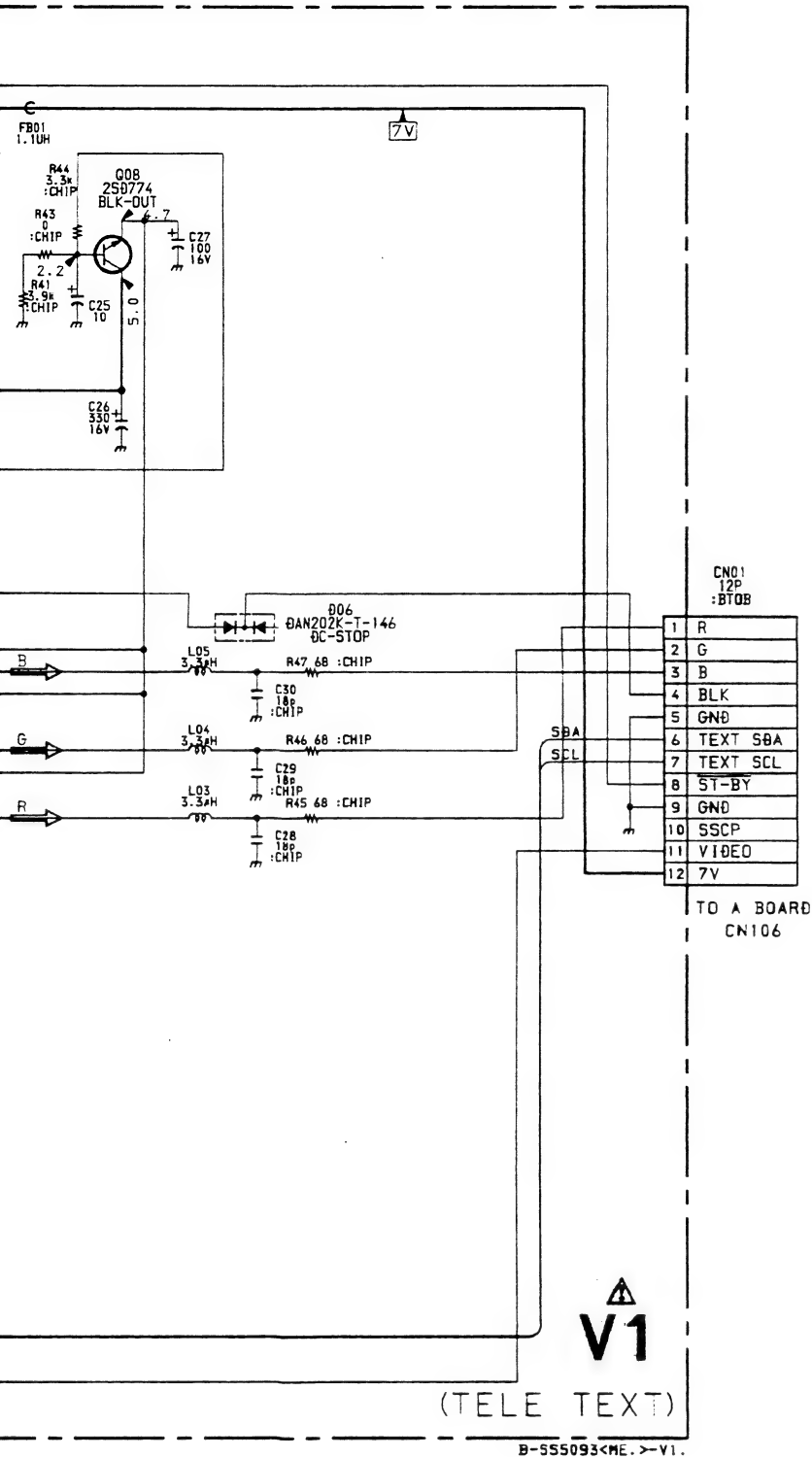
A1 BOARD IC1203 AN5262



[POWER]

(KV-G25M1 (RUSS) only)



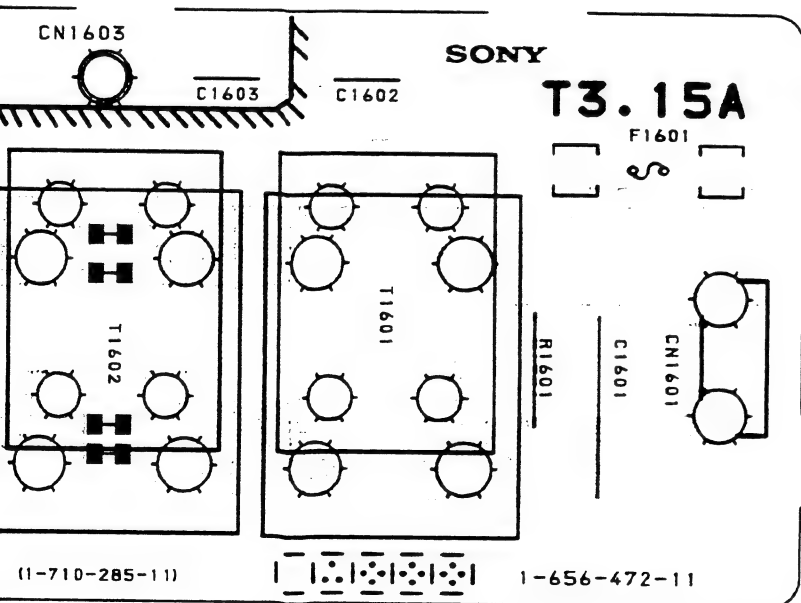


WIRING BOARD

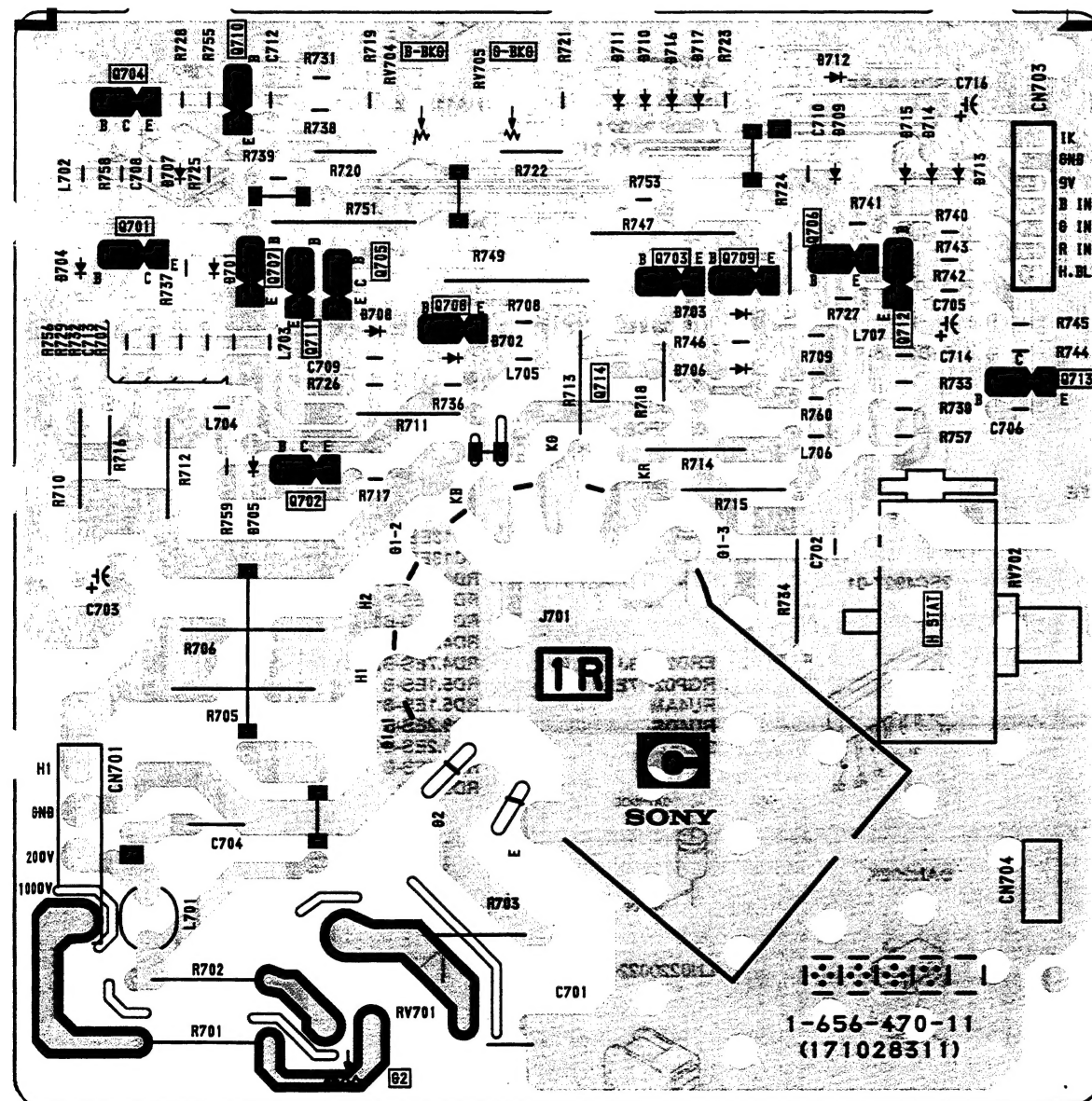
F1

[POWER]

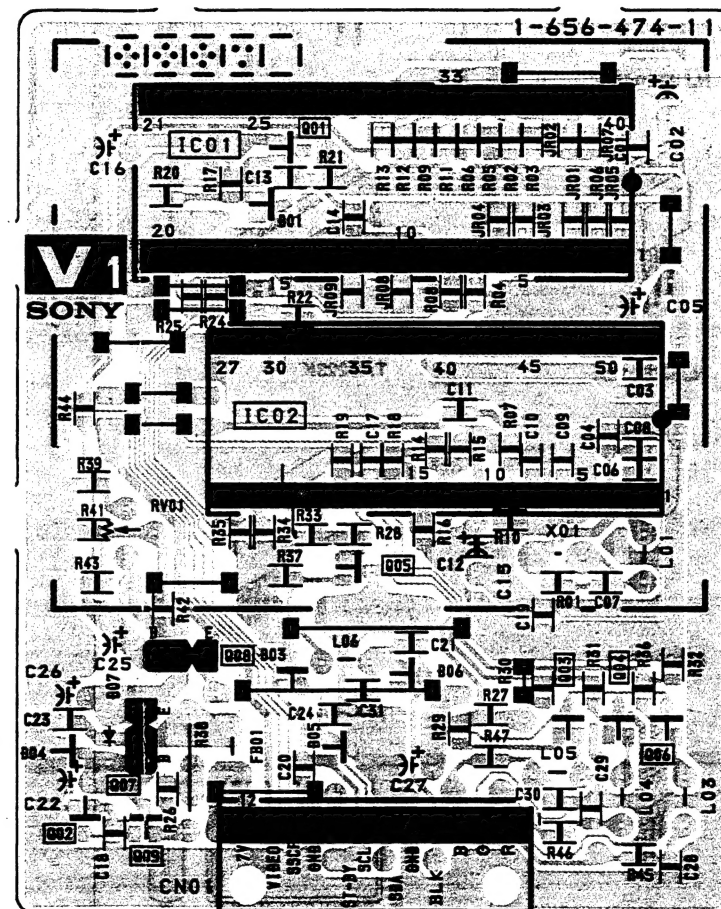
— (KV-G25M1 (RUSS) only)



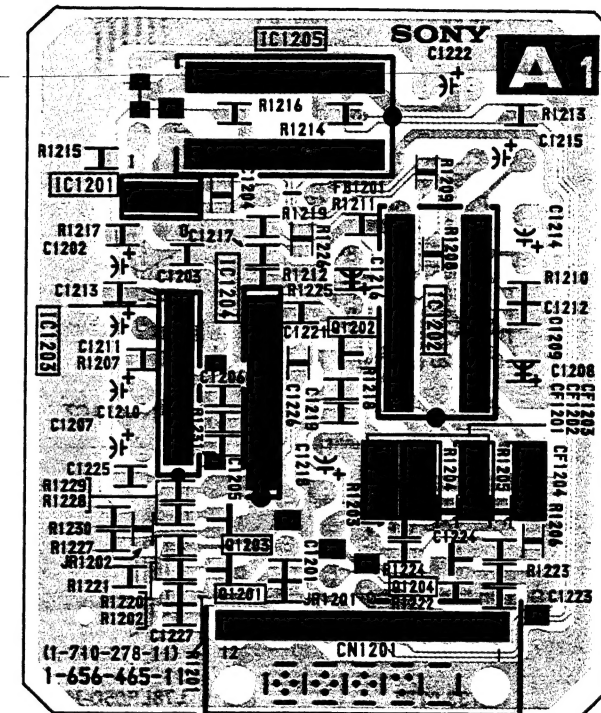
- C Board -



– V1 Board – (KV-G25M11 only)

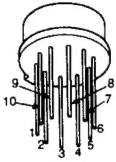


– A1 Board –

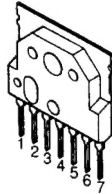


5-4. SEMICONDUCTORS

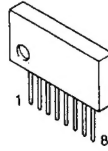
AN5262



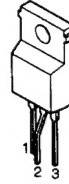
LA7830



NJM2234L

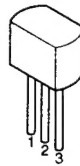


SE-135N

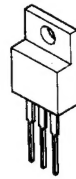


CAT24C04P (8PIN)
CXA1110BS (30PIN)
CXA1315P (16PIN)
CXP85116B-615S (64PIN)
CXP85224A-010S (64PIN)
P83C654 (40PIN)
SAA5281ZP (52PIN)
TDA4665T (16PIN)
TDA8366N3D (56PIN)
TDA8395T (20PIN)
TDA8424 (20PIN)
TDA9820 (16PIN)
TDA9821 (16PIN)

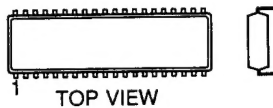
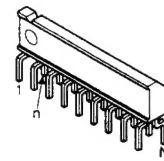
LA7910



NJM7805FA



STR-S6708



Dual In-line Package
Pin 6 ~ 98

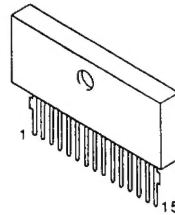
LM78L05ACZ



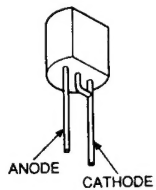
NJM78L12A



TA8223K



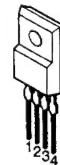
HZT33-02TE
μPC574J



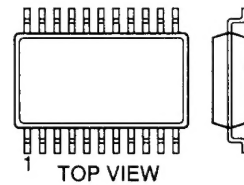
L78LR05D-MA



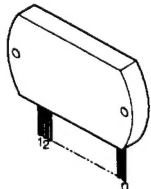
PQ09RE11



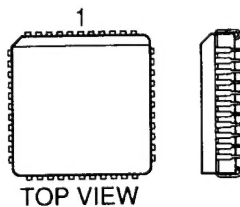
μPC4558G2 (8PIN)



LA7016

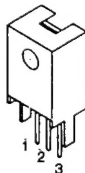


MSP3410 (44PIN)



Quad Flat J-leaded Package
Pin 20 ~ 996

SBX1790-11
SBX1790-51

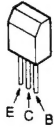


Small Outline L-leaded Package
Pin 8 ~ 98

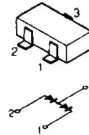
KV-T25L1/T25MF1/T25MN11
KV-T25SF1/T25SF11
RM-870

DTA114EK
DTC114EK
DTC143TK
DTC144EK
2SA1037K-QR
2SA1162-G
2SC1623-L5L6
2SC2412K-QR
2SC2712-YG

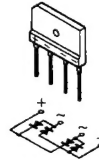
2SC3209LK
2SD774-34



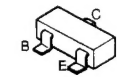
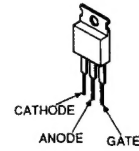
DA204K



LN4SB60
RBV-406H



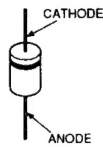
5P4M



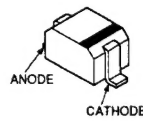
2SD2394-EF



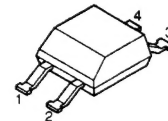
D1NL20
EL-1Z
GP08D
GP08DPKG23
RGP10GPKG23



MA113-TX



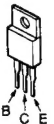
PC123F2



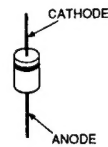
2SA1091
2SA1091-O
2SC2551-O



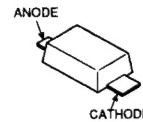
2SD2394-F



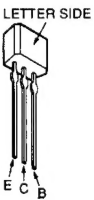
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30DF6FC8



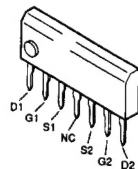
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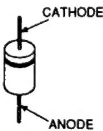
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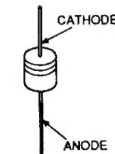
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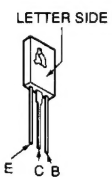
ERD29-08J
RGP02-17EL
RU4AM
RU4DS
31DF2



RD13ES-B
RD13ES-B2
RD2.2ES-B
RD3.6ES-B
RD3.6ES-B1
RD4.7ES-B
RD4.7ES-B2
RD5.1ES-B
RD5.1ES-B1
RD8.2ES-B
RD8.2ES-B2
RD9.1ES-B
RD9.1ESL



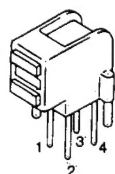
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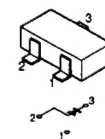
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LN0220022G



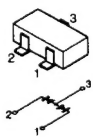
RD3.6M-B
RD3.6M-B1
RD5.6M-B
RD5.6M-B2



2SC2669-O



DAP202K



6-1. CHASSIS

●: BVTP3 × 12 7-685-648-79

■: BVTP4 × 16 7-685-663-79

